









1988

Mr. Stanback

1

Mr. FormicivorusChongoHNHR

29 Mar Roost watch &amp; ambush set at 85 hole (low, nice). Nothing.

Dec 87 Acorn Count: 2000

1 April Roost watch: birds dead quiet, dropped from hi in the gran at 1853. May have gone to the back hole, maybe Yif tree.

4 April 1630 Peeped 85 hole - nothing. The new hole on the back side is a dead end.

20 Apr 0640 Hello'd holes - nothing.

30 Apr Walt reports 1 egg in Chgo/Buck hole watch 15 may

6 May " 5 eggs in "

15 May 0700 Tried to find the bloody nest and couldn't. Afterwards checked 85 hole - nothing.

1530 Finally found the nest (grrrr) RL = 5.1, LL = 6.65, RW = 4.2 (new), LW = 6.3 + 1 unhatched fert egg

19 May 1830 LW = 16 = R, LL = 23.1 = K Not Chongo see Banx

21 May 1530 Well, I suppose someone should have done this @ 1 month ago. We missed the nest. Watching from the Banx side of Madrone Cañon, I quickly see 5 birds. I only have binocs, but they (1-2) are acting like babies. I watched @ 20 min, but saw no flights to holes.

26 Jun 1400 1617 62.8 39 17.5 13

1618 61.2 29 16.4 -

1 Oct Roost watch at granary hole - nothing.

1 Nov 1300 Saw MLB-LP (1618) at pan trap & KNOW  
Set ambush at 86 hole - bird didn't like it

12 Dec Acorn Count: main tree + lean = 2100

2250

(saw ♂ 110)

downed logs = 150

over →

14 Dec Ambush at high hole in dead limb of sycamore.  
Caught 1110. Boo!



1988 M. Stanback

M. Formicivorus

Buckeye Annex

HNHR

30 Apr 1 egg in hole (old Buckeye hole)

6 May 5 eggs "

15 May 1530  $RL = 5.1$ ,  $LL = 6.65$ ,  $RW = 4.2$  (new),  $LW = 6.3$   
plus 1 unhatched Fert egg. Jane sees NoBA ♀ & ♂

19 May 1830  $LW = 16 = R$ ,  $LL = 23.1 = K$ . There was no  
egg, so I think it did hatch, and died

31 May 1630  $\bar{K} = 34.2$  (11.7),  $\underline{R} = 26.2$  (11.0)

6 Jun 1000 Dead babies.  $\underline{R}$  was minus it's head, so I think  
we're looking at predation.  $\bar{K} = 6^{th}$   $1^{\circ}S = 10.5$ ,  $1^{\circ} = 12$   
 $TS = 9.5$ ,  $T = 14.5$ . There were (at least) 2 birds here  
semi-scoolding me.



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1988

M. Stanback

1

M. FormicivorusBUCKHNHR

28 Mar 1100 Bird in hole (87 nest hole)

Dec 87 Acorn Count: 9200

5 Apr <sup>1300-</sup>1330 Should've known! Babies! Hatch 2 Apr(?)

LB = 17.5 LL = 14.3 RW = 13.8 LW = 11.0 runt = 5.5

6 Ap 1245: 20(8.9) 15.8 16.4 13.5 6.5

7 Ap 1300: 24.6(10)<sup>B</sup> 19.5(inj)<sup>K</sup> 21(9.65)<sup>O</sup> 18.2(8.4)<sup>Y</sup> 9.6

8 Ap 1315 27.4(11) 23(inj) 23.7(10.7) 20.5(9.3) 11.7

9 Ap 1400 34.9(11.8) 26.5( ) 28.8(11.45) 25.9(10.25) 15.5

24 Ap 1300 Wt Char Bill 1°s 1° TS T Hem

O 1474 74.3 73 19.7 26.7 47.3 24.5 31.7 42, 43.5

K 1475 74.9 64 19.5 <sup>21.5</sup>~~47.3~~ 38.6 20 27.1 40, 40

B 1476 76.3 75 20.6 29.5 48.3 23 35.5 47, 46

Y 1477 66.6 60 18.7 21.4 35.1 21 25.7 44, 42

r 1478 59.7 42 18.75 17.7 19.7 9.4 16.4 36, 36

1474 =  $\frac{M}{R} \bigg| \frac{RO}{O} \textcircled{K}$  1475 =  $\frac{W}{K} \bigg| \frac{M}{LB-K} \textcircled{R}$  1476 =  $\frac{LB}{M} \bigg| \frac{LB}{DB} \textcircled{R}$ 1477 =  $\frac{Y}{Y} \bigg| \frac{RW}{M} \textcircled{KR}$ 1478 =  $\frac{LG}{LG} \bigg| \frac{MV-Y}{MV-Y} \textcircled{RK}$ 

19 May 1745 Hello hole, nothing [1845 2 juvs in nest hole]

21 May 1600 Juv in nest hole

1700 No one in nest hole or low hole up hill.

27 May 1630 5 Freshish eggs (couldn't reach)

3 Jun 1000 Still 5 eggs - opaque

6 Jun 1000 BL = 3.2, RL = 3.85. A third baby wasn't reachable. + 2 eggs.

8 Jun 1015 <sup>LL2</sup>BL = 7.1, RL = 7.25, RW = 4.8, LW = 3.7, B = 2.9

10 Jun 1000 LL = 11.95, RL = 12.55, RW = 8.0

11 Jun 1106 LL = 14.6, RL = 16, RW = 8.9



Q

Damn!



1988

M. Stanback

2

M. FormicivorusBUCK

G

W

HNHR12 Jun 1020 RL = 20 (9.35) DG, LL = 18.2 (W), - = 9.4

13 Jun 1100 25.9 (10.15), 23.8 (9.9), 14

14 Jun 1040 32.3 (11.4), 28.45 (11.05), 17.3 (9.4)

15 Jun 1045 36.5 (12.45), 33.7 (12.35), 17.6 (10.1) ← ?

17 Jun 1055 43.4 (14.2), 43.3 (13.95), 25 (11.7)

19 Jun 1055<sup>G</sup> 51.5 (15.1) 3.6 1.5 3.3

W 53.8 15.1 3 4 4.1

- 33.4 13.45

21 Jun 1125<sup>G</sup> 57 inj 9.9 4.7 7.6

W 60.5 16.1 9 6 8.5

- well shit

23 Jun 1045<sup>-</sup> 47 16 4.9 3.1 4DG 64.2 44.5 ~~17.5~~ <sup>17.5</sup> ~~16.5~~ 18.5 8.2 15W 70.9 45.5 17.55 15.7 17.1 10 15.525 Jun 1130<sup>-</sup> 53.5 17.11 10.4 4.4 7.9DG 68 55.5 18.15 24.5 28.5 12.5 23

W 77.3 56 18.3 23.5 27.1 16.4 22.7

28 Jun 1115<sup>-</sup> 58.7 47.5 18.4 18.5 23.5 11 17.5

W 77.8 73 19.65 25 44.2 20 33

G 67.5 71 19.31 27.5 44.6 16 32.5

30 Jun - 66.6 59 19.2 22.5 34 12 24 Time? @ 1200

NG 73 82.5 20.6 29.7 55.6 18 39.4

KW 81.9 83.5 20.3 23.5 54.9 24 39.5

2 July 1125<sup>KW</sup> 82 93 21.05 23.5 66 21.5 46 13

NG 73.8 92 21.1 25.4 66 16.5 46 G

- 69.9 71 ~~21.85~~ <sup>19.85</sup> 26.5 45.6 ~~16.3~~ 30.6 P





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M. Stanback

3

M. FormicivorusBUCKHNHR

15 July 0645 - 0945 : Census & juv watch : +10 : 665, 987, 1003, 1395, 1475, 1476, 1477, 1478, J  $\frac{KW}{NM} = 1.25$   
 J  $\frac{MDB}{RWBR} = 1.26$  .  $NW0 > 1478$ ,  $KM > JWM$

Now juvs still going to hole alot. Adults were not censused super thoroughly - I was concentrating on juvs. On 13 July 1003 was down near Blm Pond.

21 July 0705 - 0900 Juv watch. Dead & dull. Saw only  $\overline{BY(N)}N$

11 Sept 1476 ♂ at Pump pan

2 Oct am. Silent chasing at Y, looks to be a couple intruders. One is ♂ 1476.

29 Oct 0945 ? ♀ 1624 at Red House Mv M. Also ♀ 1478.

1 Nov 1300 Saw at KNOL : 1477, 1624 ♀, 1625 ♀, 1626 ♀, 1476, <sup>1478</sup> 987,

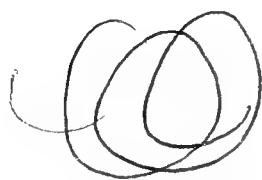
12 Dec Acorn Count : leaning logs 190

downhill 3000

uphill 3500

Total

6690





1988

M. Stanback

M. FormicivorusPLQEHNHR

28 Mar 1130 Bird in 87 nest hole

Dec 87 Acorn Count: 4201

1 Apr 1730 checked hole - no eggs

3 Apr 1115 2 eggs! One is newer. ... #1 is first laid, #2 is 2<sup>nd</sup>.

4 Apr 1745 marked egg 3

5 Apr 1745 (1) 25.4 x 19.7, (2) 25.7 x 19.5, (3) 25.2 x 19.6, (4) 25.45 x 19.2

13 Apr Walt reports 5 eggs ( ) Experimental Group

17 Apr 1815 RL = ~~6.85~~ 5.85 LL = 4.5 other eggs tossed18 Apr 1815 8.75 7.42 <sup>diot, you didn't</sup> check the shells

19 Apr 1800 11.7 8.3

20 Apr 1825 14.9 10.75

21 Apr 1815 18.9 (9) 11.5

22 Apr 1815 21.9 (10) 13.8

25 Apr 1820 36.6 (12.2) 19 (10.5) ♂ 1442 attacked me repeatedly

26 Apr 1800 41.1 (13.3) 20 (11.3?)?

28 Apr 1840 55 (14.65) 29.3 (12.2)

30 Apr 1835 60 (15.8) 32 (13.3)

2 May 1840 70 (16.8) 7.9 (6.2) 10.5 41.1 (14.2)

4 May 1845 79.5 [41.5] (17.35) 16.85 (10.8)<sup>TS</sup> 17.8<sup>T</sup> 44 (15.2)

8 May 1850 90.5 66 19.4 22.7 38 17 30.7

52 16.7 4.5

9 May 1700 93.5 71 19.75 26 43.3 18.5 34

52.3 24 16.6 3.3 5.0

11 May 1845 90.5 84 20.9 24.4 55.7 17.7 40

58.1 17 6 7.5 9.5

13 May 1700 86.6 93.5 21.75 23.5 66 19 47

65 34 17.55 10.3 10.8 11 15







1988 M. Stanback

2

M. FormicivorusPLQEHNHR

- 31 May 1000 5 opaque eggs (one dented & cracked - dead)
- 2 Jun 0945 Not hatched yet. ↑
- 4 Jun 1100 4 eggs (yep, one's gone, but ) Judy reports weird behavior
- 6 Jun 0800 RL = 4.75 (hatched yesterday - skinny), LL = 3.7  
The 2 other eggs died (were killed) while pipping. Was it the weird ♂ or dumb juvs?
- 7 Jun 0800 Failed due to the Annex movers yesterday. Judy saw 0 Feedings in 3 hrs (3 non-entry visits)
- 14 Jun pm Saw both Plge babies.
- 20 Jun I've been hallowing holes here all along with no luck
- 27 Jun 0850 Bird to hole (88 nest)  
1640 Climb & peep 88 hole - nothing.
- 29 Jun 0715 - 0730 Watched for nestiness - nothing. Saw 1529 (MO)
- 1 July 0900 Saw bird make quick visit to hole. Climbed - empty, but seem to be a few fresh chips.
- 3 July 0800 ♀ into hole  
15.30 1 fresh egg (#1)
- 4 July 1515 Marked 2nd egg → 
- 5 July 1900 3rd
- 6 July 1430 4th → 
- 11 July 1015 Peeped and saw 5 eggs.
- 17 July 1640 RL = 5.95, LL = 6.8, LW = 5.95. Egg #4 pipped and finished his cut, but was capped and died. 1 removed. Egg #5 Fertile & unhatched, dead = 4.18
- 18 July 1725 RL = 8.7, LL = 10.6, LW = 7.7 + unpip egg
- 19 July 1725 12.4 13.3 10.9 4.0
- 20 July 1715 15.5 17 (8.6) 15.0 — gone (murder?)





1988

M. Stanback

3

M. Formicivorus

PLRE

DB

0

HNR

21 July <sup>1715</sup> RL = 19.95 (8.65), LL = 20.9 (9.85), LW = 19.5 (8.2)

22 July <sup>1705</sup> 23.6 (9.8) 26.5 (10.95) 22.3 (9.85)

23 July <sup>1715</sup> 26.2 (10.88), 28 (11.95), 25.3 (10.73)

24 July <sup>1745</sup> 32.5 (12.3) <sup>33</sup> 31.5 (12.9) 32.0 (11.35)

for further records see Jane's notes

7 Sept 1420-1440 Sparse census: Saw 973, 1442

11 Sept 0700 ♂ 1530 at Y

12 Sept 0630-0645: ♂ 1529

0830-1015: Census: + 10: 521, 973, 1403, 1441, 1442, 1529, 1530, 1665. I saw all birds repeatedly (1665 only twice) - never heard baby noises except the once with 1665

16 Oct 0815 Saw a bird go to ground to pick up an acorn. T-pole roost holes are filled. Saw: 973, 1441, 1530, 1665, 1442

5 Dec Acorn Count: T pole 120 + <sup>3</sup> holes ≈ <sup>3</sup> 4002° gran ~~2 way~~ = 7100 ≈ 1250

1° gran (2 way + all snags) ≈ 3500

3<sup>rd</sup> position Total6000





1988

M. Stanback

1

M. FormicivorusYHNHR

- 28 Mar 1030 Saw ♀ 675 ( $\frac{g}{w/m}$ ) at Barn, also ♂ 1150
- Dec 87 Acorn Count: 420
- 3 Apr 0930 ♀ 1350 (old Y H/B and present Kuo/PB) was here getting chased around the barn by a Y bird.
- 7 Apr 1450 Eagle eye here spots bird in hole. Need a ladder.
- 10 Apr 0700 Bird at 87 hole (again 1110)  
1400 Check hole - empty, but looks good.
- 11 Apr 1200 1 Fresh egg - can't reach it (neither can Jane-damn)
- 12 Apr 1800 Morgan can reach! She takes out the 2 eggs and 1 put in wood chips to the desired level. #1 + 2.  $23.3 \times 19.55$  (1)
- 13 Apr 1720 Labeled egg #3  $24.55 \times 21.05$  • • (2)  $24.05 \times 20.65$
- 14 Apr " 4  $24.9 \times 20.7$  •
- 15 Apr 1300 " 5  $25.4 \times 20.85$
- 18 Apr 1800 6 eggs  $24.85 \times 20.35$
- 26 Apr 1600 None hatched yet.
- 27 Apr 0550 RL = 4.2 LL = 4.15 RW = 4.5 Eggs #1 + 5 pipping, egg #6 not yet pipped. Because I weighed them before any feeding occurred, I think the size difs reflect egg size difs, ie RW from biggest egg.
- 1210 <sup>dropped</sup> RL = 5.6, LL = 5.22, RW = 5.55, <sup>B</sup> ~~new~~ = 3.7, LW = 4.6
- As eggs 1 + 5 were at the same stage of pipping this am, I will assume that LW (bigger) came from egg 5 and that B came from egg 1. Yes, I dropped RL @ 8 inches.
- 28 Apr 1145 RL = 8.8 LL = 7.9 RW = 8.45 LW = 6.4 B = 3.55 <sup>new</sup> 3.7
- 29 Apr 1215 13.1 9.5 10.8 8.27  $\swarrow$ ?  $\swarrow$ ? 3.25
- 30 Apr 1200 14 12.5 13.8 8.97
- 1 May 1150 18 14.4 15.5 8.8 (red scale)



1988

M. Stanback

2

M. FormicivorusVHNHR

2 May	1230	RL = (G) = 22.3 (10), LL = (M <sub>v</sub> ) = 17.2 (9.2), RWFR = <sup>18.8</sup> 18.8 (9.5), <del>9.2</del>
3 May	1155	25.2 (10.8) 18.8 (9.8) 21.7 (10.3)
4 May	1210	27.5 (11.6) 20.7 (10.75) 25 (10.9)
6 May	1245	37.2 (13.2) 27.2 (11.8) 31.3 (12.4)
8 May	1345	45.9 (14.65) 33.3 (13.25) 40.9 (13.75)
10 May	1300	60 (15.9) 44.8 (14.5) 50.9 (15.2)
12 May	1230	71.9 (17.1) 8.2 (5.7)   53.9 (15.65) 4 (1.5)   62 (16.4) 5.5 (5.2)
14 May	<sup>1145</sup> m	59.8 33 16.7 10.2 5 6
	R	69.6 17.35 12.7 10.8
	G	78.5 18.25 14.8 15.5 12.8
16 May	<sup>1100</sup> M <sub>v</sub>	69 44 17.8 16.8 18.8 9.6 13.5 (2)
	LG	82.4 54 18.9 22 26.7 12.6 21.3
	R	80.7 47.5 18.3 19.6 22.4 17.7 18.6
18 May	<sup>1325</sup> R	81 61 19.2 22.5 34.3 15.5 25.5
	M	73.7 55.5 18.3 21.5 29.8 12 20.4
	G	84.5 64.5 19.45 24 39.3 15 27.8
19 May	G	82 70 19.9 26 44.5 17 31
see cap rec	M	72.4 60 18.8 23 35 15 23.3
	R	80 65.5 19.5 23 39.5 17.5 29
21 May	<sup>1315</sup> NG	85.7 85 20.75 28 57 20 38
	MBM	87 78 20.3 25.5 52.3 21 36.5
was MvM	<sup>Y</sup> M	80.8 73.5 19.4 24 48 20.5 30.5
23 May	<sup>1345</sup> YM	79.1 86 20.2 27 59.7 21.5 37 G
	NG	84.8 94 21.55 27 67.5 23 44 P
	MBM	86 90 20.9 26 63.2 23.5 43 Y

7 Jun Hello hole - baby inside - wouldn't budge

8 Jun 0930 Bird Flushed from hole - think was Ad ♂



safe, my

1988

M. Stanback

3

M. FormicivorusYHNHR

12 Jun 1540 - 1650 Juv watch. Saw adults, 1559 repeatedly.  
Saw 1560 once. Didn't see 1561.

16 Jun ~~1400~~ 1500 Saw 1559, 1560, 1561. 1561 >> 1560.  
mw, OKR, RO, OWOW, MKM

3 Jly 1615 PID: 1560, 1561

5 Jly Saw 1559, 1561

11 July 0845 - 0920 PID: 675, 1559, 1560, 1561

20 July 0630 - 0715 : + ID: 675, 1150, 1559, 1560, 1561

24 July 0720 - 0745 : 1150, 1561

10 Sept 0950 - 1020 : 675, 1150, ♀ 1561. Lotsa new holes.

11 Sept 0650 - 0720 : 675, 1150, ♀ 1560, ♀ 1561, ♂ 1530 Pl<sub>2</sub>, (♀ 1445 Knol?)

2 Oct am. Lots of silent chasing here. Seem to be  
several intruders. Power struggle? I see B ♀, and  
later I think I see B ♂, also things got quiet  
pretty quick. Only intruder I did was ♂ 1476 from  
Buck. Probably him & some brothers (just like last yr)

29 Oct 0915 ♀ 1560 was at Red House pan with KNOL  
birds & 2 mystery birds.

16 Nov ~~A~~ Filled the feeder with acorns and hung it low on  
the granary tree.

20 Nov About  $\frac{1}{3}$  of the acorns are gone.

6 Dec Acorn Count: 1000 (Feeder still  $\frac{2}{3}$  full)

Saw 1560, 1561, 1150

12 Dec 1015: Knol pan: ♀ MRWN, ♀ MKNW <sup>SHW</sup> 1389 ♀ OLG <sup>SHW</sup> M = 1374

NOBA ♂ & NOBA ♀ arrived after  $\nabla$  left.





1988

M. Stanback

1

M. FormicivorusKNOLHNHR

Dec 87 Acorn Count: in Y-not gran: 800

3 Apr 0930 ♀ 1350 was at barn getting chased by Y bird.

18 Apr 1745 Hello hole Walt found - nothing

26 Apr 1730 Snoop for nests - nothing.

Walt reports 9 eggs in his new hole

Walt reports 5 of the eggs gone

11 May 0840 Snoop for nests - nothing

21 May 1800 Watched a while + found nest - new hole in n/c

22 May 0830 Cut open - 8 opaque eggs!

25 May 1645 RL=4.2, LL=4.8, RW=6.2 + 5 eggs. Very windy

26 May 0915 RL=5.1, LL=6.1, RW=7.5, LW=5.1 + 4 eggs

27 May 0800 7.45 8.9 10.6 7.1 B=3.3 BW=3.9 + 2 eggs

1425-1455 Nest watch, ♀ 1350 + ♀ 1445 (I think) seen feeding.

28 May 0720 9.3 12.8 14.1 9.3 B=dead=2.55 BW=3.65 'B'=3.6<sup>egg</sup>30 May 0735 RL=11, LL=B=<sup>19.7</sup>~~19.7~~(9.75), RW=0=20(inj), LW=12.1

31 May 0800 RL=14.9, (B)=23.8(10.95), (O)=22.5(inj), (W)=17.2(8.9)=LW

last egg died while pipping (removed)

2 Jun 0745 20.5(10.45), 31(12.95), 31.4(11.25), 21.95(10.2) <sup>photo</sup>

3 Jun 0845 25(11.25) 38(13.8) 36.9(12.15) 27.4(10.7)

5 Jun 0800 <sup>30.2</sup> 30.2(12.6) 45.9(15.1) 40.5(13.4) 31.7(12.1)

7 Jun 0825 39.3 14.15

O 52.5 14.8 1.7 1.7

W 39.3 13.9

B 52.9 16.6 1.9 3

9 Jun 0705 44.2 15.35

O 61 15.8 5.9 4.6

W 48.4 15.05

B 65.5 17.9 6 - 5 5.5 (2)



1988

M. Stanback

2

M. Formicivorus

KNO<sub>3</sub>

HNHR

11 Jan	0705	-	54.1	16.9	2.8	1.8	
	W	58.5	16.2	5.2	3		
	Q	66.3	37	16.8	12.6	-	6.5 11
	DB	70.6	37	18.87	12.2	-	7.2 12 (2)

13 Jun	OT10	63.5		17.55	8.5		3.5	7	
	W	67	36	17	11	12	4	8.4	
	DB	79.9	48	19.85	17.8	22.2	11.3	19.5	(2)
	O	74.9	48	17.75	17.9	22.2	10.7	17.8	

14 Jun 1650-1710 Watched nest:  $\overline{mLB} = 1350$ ,  $RWN = 1445$ ?

16 Jun	Saw $\overline{W.R.F.O} = 1301$
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	B	C	D	E	F	G	H
1100	85.2	67.5	21.2	27.5	40.5	22.2	30
-	72.5	49	19.1	18.3	23.9	9.4	17.8
w	78.5	56	18.3	21.5	29.7	10	19
0	80.2	67	18.95	25	40	15.5	19.2

		0940						
18 Jun	BWO	81	77.5	20	27.5	50.8	20.5	35.5
	YGB	74	60.5	19.95	20.5	34.3	12.7	24
	MPK	84.5	79	22.2	25.5	51.4	26.3	36.6
	WM	83.5	66.5	19.3	22.5	39.7	13.5	25.5

20 Jun	1000 BWO	79.8	88	20.6	22.5	62	23.5	42	
	MPK	78.9	88	22.95	24	62	28	43	G
	WM	85	77.5	19.95 <del>21.3</del>	21.3 <del>50.7</del>	50.7 <del>19.95</del>	18.5	32	B
	Y&B	78.5	72	20.75	24	45.3	16	31	Y

3 July 1630  $\overline{MK} = 1605$ , possible 1603: LLK

11 July 1950 Knol must have a roost hole in the big sycamore beside the crossing at the Y.

20 July 0715 - 0800, Census 1604

24 July 0630-0720. 1301, 1350, 1445, 1604.

9 Aug 0645 + 10 : 1301, 1445





M. FormicivorusKNOLHNHR

- 11 Sept 0730-0900 Census, esp down near Pump. + 10:1301, 1350, ♀ 1604, Y RWN ♀ = 1445 ??, Also saw: ♂  $\frac{DG}{M}$  = 1398?  $\frac{GG}{GM}$  = 1388<sup>SHIL</sup>, ♂  $\frac{bb}{MB}$  = 1476<sup>Buck</sup>, ♂  $\frac{bBBb}{SHIL}$  = 1426, ♂  $\frac{OY}{KY}$ :  
♀ WR = 1605 ??
- 12 Sept 0700-0800: 1301, 1605  $\frac{WO}{MK}$ . I saw 1605 twice - at First I thought ♂, but next looked to be very early stage ♀. These birds are storing blue oak acorns (from 200 ft uphill) in the Y-not granary.
- 1 Oct 1030 Stopped + 10'd ♀ 1604
- 2 Oct am Census: 1301, 1445, ♂ 1602 ( $\frac{MOK}{MK}$ ), ♀ 1605 ( $\frac{MK}{MK}$ ) and ♀ 1604.
- 19 Oct 0745 At big dying pines in Walt's drive: Some mild chasing going on. At least 1 NOBA ♂ involved. (He eventually ended up alone and finally left towards Plge) Birds were heard coming + going from SHIL (+ calling from that direction) + the pines (SHIL or KNOL birds)
- 29 Oct 0915 Several birds on T-pole w box 1, Red House pan trap, and Red House. ♂ 1301, ♀ 1604 (KNOL), ♀ 1560 (Y), and 2 mystery birds: ♀ Y/B-W (N) and ♀  $\frac{mmb}{MvM}$ . I should check old KNOL lists.  
I think it was Right leg: ♀ 1624 (Buck)  
Also KNOL 1605.
- 1 Nov 1300-1400: Buck 1477, 1624, 1625, 1626, 1478, 1476, 987; CHGO 1618; SHIL 1385, 1426, NOBA ♀, NOBA juv; CECN 1525; KNOL: 1445, 1301, 1605, NOBA ♂ ♂  $\frac{LB}{Mv}$ , new ♀  $\frac{MW}{MW}$ ,  $\frac{DB}{M}$  ♂?, R Mv BW
- 6 Dec Acorn Count: 2200
- 13 Dec 1145-1220: 1604, 1605



1988

M. Stanback

1

M. FormicivorusPUMPHNHR

- 30 Mar 0840 stores in the Blm Pond tree
- Dec 87 Acorn Count:
- 26 Apr 1700 I snoop around for nestiness, but find nothing.
- 27 Apr Reynolds says birds are hanging out in Pond tree  
I've been checking but see nothing
- 10 Jun 1530 Hear a bird in Blm Pond tree, but can't spot it. Who?
- 14 June 0645 Hear a bird in Pump thicket. Needs a watch.
- 13 July 1200 About 10 birds hanging around down here  
(I think for the H<sub>2</sub>O) Some were drinking  
from pan traps. Saw ♀ KW, ♂ M/DA/Y.O  
and ♂ LB-Y/LB-Y. ♀ is 260 (SHIL) — ?  
↳ Hey, this is BUCK ♂ 1003
- 24 July Knol birds, and a NOBA juv seen at pan trap
- 13 Aug 0815-0845 Lots of birds here (getting H<sub>2</sub>O): ♀ 260  
From SHIL, 1800 ♀, and juv M/YR/YK (who is it?) <sup>PLQ</sup> 1529  
Jane saw a Northern Shrike here yesterday.
- 11 Sept 0800-0900 There are a lot of birds here (including  
KNOL and as yet unid (but banded) birds.) However, around  
the Pump trees there are several NOBA birds.  
At least 1 ♀, 2 ♂, and 1 juv.



bill  
age  
wt at  
which  
wt = wing

wing = bill

sex ratio  
varies w  
what they  
have at the moment?

187

297

1988 M. Stanback

1

M. Formicivorus

1500

H/NHR

Dec 87 Acorn Count: 4970

4 Ap 1000 Climb. Empty, but good shape - looks likely.

13 Ap 1300 Bird in hole - climb, but no eggs (Ok yes, Walt cut open a hole on the lane that had a bird in it - no eggs - very rotten - I broke the limb that same day - cops.

18 Apr 1720 5 Freshish <sup>marked 'em</sup> eggs (not super fresh, and slightly warm)

24 Apr 0915 Checked - 5 unhatched eggs

25 Apr am - still not hatched

27 Apr 1345 - still not hatched dammit.

28 Apr 1400 RL = 6.1, LL = 4.55, 1 pipping, 2 unhatched

29 Apr 1400 9.3 7.0 RW = 3.9, + 1 pipping egg - so where is the other baby (or egg)?

30 Apr 1415 13.1 9.5 3.5 3.1 (last 2 going fast)

1 May 1400 Arriving to find a low level power struggle - ♂ must've kicked off. Babies ice cold <sup>(dead)</sup> and have fly eggs all on them. He must've died <sup>last</sup> night and didn't sleep w the kids. I brought the kids back to the lab for pickling and while I washed the fly eggs off, they moved! Alive, but not for long - they both died later today

17 May? 1700 4 Fresh eggs (#4 laid today?)

20 May pm Still 4 eggs

27 May 1000 RL = 5.0, LL = 4.9, 1 egg pipping (#2), #4 not yet pip

28 May 0800 7.5 7.4 RW = 5.25, #4 pip

30 May 0815 14.5 16 8.8, #4 hatched, died, removed by birds

31 May 0840 Y = 19.75 (9.15), LB = 19.6 (9.1), RW = 11.2

1 Jun 0850 23.6 (10.15) 23.7 (10.05) 15.9

2 Jun 0827 29 (11.05) 28.9 (11) 17.7 (9.3)

rendezvous  
rendesvous

1988

M. Stanback

2

M. Formicivorus1500HNHR

3 Jun 0920 Y = 33.5 (12.1) B = 35.7 (12.1) 20.5 (10.2)

On my way up the tree I found a ~ 60 cm gopher snake climbing around (@ 20 Ft up) I took him out of the tree and released him elsewhere

5 Jun 0840 Y = 37.4 (13.6) B = 39.8 (13.75) 27 (11.75)

7 Jun 0900 46 (15) 50.4 (15.35) 32.2 (13.15)

9 Jun 0750 54.5 (15.6), 58.3 (16) 3 (4.5), 37.8 (13.9)

11 Jun 0740 42.9 14.8

Y 63.8 16.75 4.3 — 4.5 —

LB 68.8 16.6 7.1 7.6

13 Jun 0755 51.9 15.6 ~~3.4~~ 3.4 2.5 3.4

B 78.8 38.5 17.6 13.4 15 14.5 —

Y 75 34 17.45 10.5 9.5

15 Jun 0945 61 32 16.7 8.7 9 8 10

LB 84.3 51 19.15 18.7 25.4 22.2 23

Y 79.8 45.5 18.9 15.3 20 11.6 17.6

17 Jun 1000 65 42 17.7 16 18 12 16

Y 83 57 19.9 22 30.7 17.4 25

LB 80.5 64 20 22 37.3 16 31

19 Jun LB 83.5 77.5 21.1 25.3 50.5 19.7 38.5

Y 88 69.5 20.7 24.4 43.3 17 33

— 70.9 52 18.55 17.8 28.3 13.8 23.8

21 Jun ~~1225~~ 69.9 64 19.1 ~~21.3~~ 21.3 39 16.5 29.8

WPY 85 81.5 21.75 24.5 54 19.5 39

BN 84 88 21.85 26.5 61 20 45.2

23 Jun 1250 — 73.4 76 20 23 50.5 18 36.2 B

WPY 89.3 92 22.6 26 65.8 17 46.5 G

BN 90 98 22.63 27 71 15 52 Y





1988

M. Stanback

3

M. Formicivorus1500HNR

10 Aug

0850 - 0955. Wierdness here. Saw 297, 1608, 1609, + 1610. Did not see either F1367 or 1329.

I think there was only one of them here anyway and the other died, because there is a semi-power struggle here. But not really - no garricks, no drumming. Looks more like mate guarding - lots of following and wakas - little chasing. 1500 seems to have split in two. The main granary is occupied by 297, the 3 juvs, and ♀ 787. From 1800 (she's an 1800 breeder) There was also a NOBA ♀ sitting peaceably with ♀ 787. Could this be the NOBA Jane saw feeding an 1800 juv on Haystack earlier this spring? Nonetheless, the other "half" of 1500 (the 2° granary) seems to be occupied by a NOBA ♂ and 1-2 NOBA ♀♀. There is some mixing between the 2 areas. ♀ 787 is interested in the 1500 nest hole, and visited it several times. 1500 still has lots of acorns, and there was some harvesting going on.

\* \* Group Update \* I'm not convinced ♀ 1367 was ever here (only seen by JB), ∴ she wasn't. ♀ 1329 disap 880810 ± 2 D. ♀ 787 (B♀ 1800) moved here as B♀ 880810 ± 2 D.

1 Oct

1015 Stopped by for quick census: ♂ 1608, ♀ 1610. Now, why hasn't ♀ 787 chased 1610 out?

3 Oct

0930 stop by: 1608



1988 M. Stanback

4

M. formicivorus

1500

HNHR

(1 Oct) 1615-1700 : 787, 297, 1608 1610. I saw all of these birds at least twice, but I'm not ready to call 1609 dead

6 Dec Acorn Count : 2200 : lots of empty holes





1988

M. Stanback

1

M. Formicivorus1800H/VHR

Dec 87 Acorn Count: 5800

4 Apr 1030 Empty, and doesn't look that good - though Judy did see a bird go in.

13 Apr 1340 Walt reports bird in hole here. I climb and with peeper see no eggs (not 100% sure, but 90%)

20 Apr 0800 8 eggs (7 + 1 runt) warmish, semi-opaque/translucent. <sup>Bird</sup> hole24 Apr 0945 No one hatched, but didn't actually see eggs (<sup>Bird</sup> hole)

25 Apr am - Still not hatched

26 Apr 1315 RL = 4.85 LL = 3.8 + 5 eggs ( $\geq 1$  infert: <sup>didn't check</sup> all, runt gone)27 Apr 1320 7.95 <sup>spot</sup> 7.75 <sup>Rw</sup> 4.6 1 dead baby, 1 pip, 2 inf

28 Apr 1330 11.5 10.5 6.45 5.3

29 Apr 1315 14.8 12.8 7.45 7.1 2 eggs

30 Apr 13<sup>45</sup>~~50~~ 18.7 16.7 8.7 9.5 1 egg

2 May 1350 26(10.2)=B, 24.3(9.8)=W 12 13.7 = "O"

4 May 1415 36.5(11.7) 33.8(12) 14.4 20.3(9.8)

8 May 1730 59.1(14.45) 52.5(14.7) 22.8(10) 37.4(12.9)

10 May 1400 B 67.3 15.2 6.9 4.3 6.0

W 63 15.8 5.1 5.1

R 46.7 14.05

- 31 11.05

12 May 1445 B 26 40 16.35 14 15 9 11.3

W 69.5 37 16.6 12 13 10 11.5

- 36 (11.5 - inj)

O 56 15.25 3

14 May 1630 W 76 49 17.65 18 23.6 10.6 19

B 81.8 51.5 17.55 20.2 25.5 11 18.2

O 65.4 33 16.7 10 - 4.3 6

- 46.3 13.3(inj)



1988 M. Stanback

2

M. Formicivorus1800HNHR

16 May

1630

DB 74 43 17.5 16.8 18.5 8 13  
 - 49.7 14.1 4.5

DB 83 63 18.65 24 36.5 15 25.5

W 80.3 61 18.8 22.5 35 16.5 26

18 May

1530

W 81 71.5 19.5 25 45.7 19 33

B 81.4 72 19.4 26.5 47 17 32

O 72 53 18.2 20.6 27.8 11 20.3

- 50.5 30 14.4 8.2 - 4 4.5

20 May

1530

MB 87 82 19.75 24 57 19.5 38.3

GWO 81 65 18.9 22.2 38.2 17 26.5

- 57.9 37 15.4 15.4 - 7.8 9

NM 83 82 20.2 24 56.5 21.7 39.4

22 May

RWNM 83.5 92 21 24 66.5 20 45 Y

MDB 84 92 20.3 22.5 66.5 17 44.5 B

The other 2 babies were gone (the 2 smaller ones, so it wasn't early fledging) (this is day 26) The door had more litter in it than usual (a sign of predation), yet these babies were fine. Snake? If snake, why did it not kill/eat all 4? If smaller snake, did it actually know which ones to eat? Is this another cost of being a runt?

8 Jun

0910 Hello holes - nothing

12 Jun

"

"

14 Jun

1545-1625 Watched for nestiness - none. Birds didn't really show up til @ 1600, but after that mostly just sat around. Did see 2 flights to E, but where to?

18 Jun

1630 7 + juv L/1.0 in snag up on SHIL  
 1010 Nest? in tree towards 1500 (faces lane)





1988

M. Stanback

3

M. Formicivorus1800HNHR

(18 Jun) Yes a nest. Cut it open. 4 kids, 2 inf eggs, 1 fert egg.

1500 RL = 5.4, LL = 5.4, RW = 4.95, LW = 3.95

19 Jun 1635 10.75, 8.2, 8.7, 6.6, B = 3.7 hey, this is wierd.

20 Jun 1600 13.2, 9.5, 11.85, 9.1, 5.15

21 Jun 1745 " 19.1 12.95 1605 14.5 5.05 " Those all done w 100 g Pesola22 Jun 1735 22.9<sup>Y</sup>(9.85), 16.4, 22<sup>R</sup>(9), 17.1, 5.8 very suspect - kill it23 Jun 1605 26.3<sup>Y</sup>(11), B = 21(9.65), 24.8<sup>R</sup>(10), W = 21.5(9.15), 6.225 Jun 1810 37.6(13.35), 28.3(11.75), 34.3(12.15), 31.6(11.4) gone

27 Jun 1725 44.5(15.1), 39.9(13.35), 44(13.5), 40.9(12.8)

29 Jun <sup>B</sup>1735 47.3 14.8 2 3

R 51.5 14.55 3.9 3.6

Y 56 16.75 3.9 3.8

W 51.9 13.8(ing) 2.5 2.4

2 July <sup>1605</sup>W 63 35 16.15 12 8.6

B 58.9 33.5 16.7 9.7 8.2 9.2

R 59.8 38 16.8 14.3 <sup>6</sup>~~3.8~~ 11.4

Y 67 40 18.8 14.5 14.6 8.3 12.2

4 July <sup>1610</sup><sub>LB</sub> 65.5 43 17.72 15 18 9 15

W 64.8 45.5 17.35 19.3 20.9 9.2 14.6

Y 69.8 50 19.87 19.7 24.8 12.5 19.15

R 66.1 48 17.85 19.8 23.3 10.2 18.1

6 July <sup>1615</sup>w 69.5 55.5 18 24 30.3 12.5 20.7

R 68 57.7 18.7 22.2 33.1 13 24.1

Y 74 60.5 20.65 25 34.7 13 25.4

B 71 52.5 18.55 19.7 27.4 13 21.2



1988

M. Stanback

4

M. Formicivorus1800HVHR

8 July

1615

W 73.9 65.5 18.8 26.5 40.6 16.5 27

R 69.3 68.5 19.05 22 43.8 15.7 30.6

LB 70 62.5 19.3 23 37.1 17 27

Y 75 70 21.25 26.5 45.5 18.5 31.5

10 Jly

1700

B 72.5 74 20.9 24.4 48.1 16.6 32.6 1650

Y 75.5 80.5 22.3 24.5 56 19 37.8 1651

R 73 76 20 24.5 53.7 18.4 36.6 1652

W 73.5 76 19.8 23.5 51.1 20 33.7 1653

12 July

1620

GM 75 84 21.6 26.5 57.7 19 39

K&amp;R 70 88 20.7 22 63.5 16 42

Yon 77.4 91.5 23.15 27 66.3 20 43.5

mw 73.5 86.0 20.7 25.3 60.7 24 39.3

10 Aug

0640-0840 Census: 770, 193, 774, 1553, 1650, 787

1651, 1653. 1553 is a ♀. 787 was onlyseen briefly, as was a ♂  $\frac{KO}{M} \frac{KO}{DB \cdot R} = 1438$ 

There was some chasing here on &amp; off this

am. See 1500 notes - ♀ 787 is at 1500

acting like the breeder there.

\* \* Group Update \* ♀ 787 (Breeder!) moved to 1500

880810 ± 2 D to become Breeder. ♂ 1438 was

declared never absent from 1800 (any claims to the contrary notwithstanding) Stupid computer fucked up.

6 Dec

Acorn Count: Main gran: 3000+

(saw 5 birds)

88b nestree: 400

3500

CO

1988 M. Stanback

M. Formicivorus

HORS

HNHR

28 Mar 1400 Bird<sup>(♂)</sup> in new hole 2' below duct tape hole. still working on hole.

Dec 87 Acorn Count:

11 Apr 1400 Spied on new hole awhile - no action (did hear birds)

26 Apr Hello holes. No birds in any. What's up?

2 May see bird near(at?) new hole by 85 hole.

9 May Snaggy snag towards Gate has a hole, and a bird in the top of the tree.

10 May am Bird in this hole

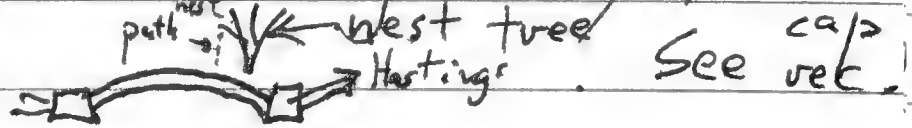
14 May Since 10 May have only seen bird at hole once, but did see one at hole this am.

16 May 1000 Bird at hole

— I've been checking this & other holes since then - nothing.

10 Jun 1445 Hello holes - nothing.

27 Jun 1300 By providence I find the nest - I heard a sneeze while driving by. Baby sticking head out. The nest is between the crossings just on the W side of the lane in a dead limb in the big oak by the path into Hors Field



		Time		1430					
(2)	NM BB	1621	77.4	105	22.4	-	-	14	56.5
(2)	PWP MN	1622	72	108	22.22			11	55.5
	nOB OBO	1623	82.8	110	23.25			13	60

28 Jun 1700 Judy watches here and reports seeing one juv fledge (walked out) and maybe another is out already

8 Sept 1100 NOBA (couldn't sex) checking out nest hole.

3 Oct 0915 Stopped by: saw no birds, no acorns in gran. Ahd? I did find an acorn that looked Acw eaten.



conjo

1988 M. Stanback

M. Formicivorus

Hay - Blom

HVHR

Dec 87 Acorn Count: 8760

2 Apr 1500 Helloed holes - nothing.

3 Apr 0745 - 0820 Watched H-B for nestiness (From Far Knoll). They (sev birds) spent a lot of time in the 87 spring "suspect" tree (uphill from granary). One bird spent <sup>2</sup> @ 15 min chasing a steller's jay around the tree (esp the W side). Another ACW joined briefly, and at one point they chased a starling.

5 Apr 0900 1 egg - couldn't reach it. Old door falling apart. Needs new door. Should they be tossing?

6 Apr 1430 Cut new ~~door~~ door. No eggs inside. <sup>put on new</sup> (Old webbing)

8 Apr 1430 No eggs - I sure hope they're just tossing.

15 Apr 1230 No eggs - back to the drawing board folks.

17 Apr Bird tapping in Fenceline hole

18 Apr Bird in Fenceline hole

20 Apr 1240 Checked Fenceline hole - 8 opaque eggs.

22 Apr 0945 Not hatched yet (tho I should have counted)

23 Apr 1300 Not hatched (counted only 7 eggs, I'm pretty sure)

25 Apr 1200 Predated - no eggs (or even pieces - snake?)

4 May 1800 4 Fresh eggs (#1-4 [1 is Freshest]) in webbing hole

LED  
7 May

new record!  
11 May 0700 10 eggs. Wow, this will be great brood reduction!

18 May 0645 RL = 5.6 LL = 5.15 RW = 4.2 LW = 5.65 B = 6.8

egg 2 inf (removed), egg 3 not yet hatched, plus 3 other unhatched  
None pipping (well, maybe one was)

19 May 0900 RL = 9.6, LL = 9.4, RW = 7.05, LW = 9.7, B = 11.0,

BL = 5.95, BW = 4.3, WL = 4.4

20 May 0740 The critical day for brood reduction. Gopher snake in nest.

10.75 11.3 9.8

1988

M. Stanback

2

M. FormicivorusH-BHNHR

(20 May) He<sup>(1+)</sup> was in deep so I couldn't get it out. Damn - the nest of the decade and it gets predated on the single most critical day for brood reduction (- 8 kids!)

30 May 1345 hello'd holes - nothing

4 Jun 0800 " "

10 Jun 0630 " (didn't go to all of them

1520-1540 Watched suspect (87) tree and 88a tree. Saw no birds visit.

11 Jun 1530-1620 Watched for nestiness from abd barn - nothing. Then walked around helloing - nothing. Few birds even seen.

23 Jun 1645-1800 Watched from blind on uphill side. Got a few hints (1 thought), but when I checked em at 1800 there was nothing. I'm getting disgusted. (Fucking leaky pen)

4 July 1415 I hello'd everything up here - nada

9 Jly 0815-1015 Spied - nothing. Saw birds flycatching but they didn't go anywhere with the food.

13 Jly 0645-0830 Watched (from top of hill in blind). There were birds, but no pattern to their movement.

19 July Well, it finally happened - Jane found juvs flying around.

16 Oct Ambush in webbing hole - caught 2 NOBA juvs. 1673 + 1674. Blood & plasma taken (@ 8 tubes) each bird. Pulled string at 0515, bled 73 0630, 74 at 0640.

12 Dec Acorn Count: stump 300, uphill tree 100, suspect tree 300 main gran (1 way 2000) (2<sup>nd</sup> way 1700)

saw 941, 1085, chasing ♂ <sup>RBN</sup> <sub>KWN</sub>, ♀ <sup>MLB</sup> <sub>KY/K</sub>

5000





1988 M. Stanback

1

M. FormicivorusLow HayHVHR

Dec 87 Acorn Count: 10,050

2 Apr 1430 3 Fresh eggs in 87 hole. Numbered.

5 Apr 0830: (1) 24.05 x 19.4, (2) 24.65 x 19.85, (3) 23.3 x 19.56, (4) 24.15 x 19.25

12 Apr Experimental Group - ♂ removal

Walt reports 1 egg missing (before ♂ release) Suspects a piece of Dap broke it. Oh well.

14 Apr 1500 No one hatched yet

15 Apr 1140 RL = <sup>5</sup>4.3 LL = <sup>4</sup>4.3 RW = <sup>5.0</sup>4.3 eggs 3 + 4 hatched

17 Apr 1215 RL = 10.3 LL = 8.8 RW = 9.75

18 Apr 1220 15 11.8 12.6

20 Apr 1210 22 (R) 18.2 18.6 (Y)

21 Apr 1215 25.1 (10.7) 22 (10.8) 22.5 (11)

23 Apr 1300 33.4 (12.95) 30.7 (13.1) 30.8 (13)

25 Apr 1310 41.3 (13.95) 38.5 (14.9) 39.5 (14.2)

27 Apr 1815 58.8 (15.8) 6 (2.5) 53.8 (16.3) 52.5 (15.9)

30 Apr 1800<sup>R</sup> 69.5 42 17.1 15.3 16.8 9.3 10.7 (2)

Y 63 17.4 8.9 8.4

- 65 18.2 11.5 7.3

4 May 1715<sup>R</sup> 81.5 65 18.4 27.5 37.7 17.5 24.6 (2)

Y 80 52.5 18.45 19.4 25.5 13 21.2

- 79 56 19.6 15.5 19.5 17.7 20

8 May 1600 - 81.4 77 20.5 27 51 19 31.8 1520

Y 83.8 78 19.7 22.6 45.9 18.5 33.5 1521

R 86.2 86 19.2 25 59.5 23.2 38.2 1522

11 May 0730 PKB 82.4 92 21.4 25 65 21 41.1 1520 pink

RM 83 100 20.1 24 72 29 47 (2) yellow

NM 83.6 85.5 20.6 23.5 58.5 18 41 1521 blue



1988

M. Stanback

2

M. FormicivorusL HayHNHR

30 May 1315 Bird in nest hole! 5 eggs - not quite opaque or t'lant

4 Jun 0745 check nest - not yet hatched.

9 Jun 0600 RL = 8.0 LL = 6.58 RW = 5.4 B = 3.42 + 1 inf egg

10 Jun 0620 12.24 9.8 8.65 3.68

11 Jun 0615 15 12.5 10.6 3.83

12 Jun 0610 18.8 (Mv) 14.6 12.45 gone + egg

13 Jun 0610 23.1 (10.5 in) 18 (9.75) (K) 17.5 (9.3) ?

14 Jun 0605 26.6 (in) 20.4 (10.68) 20.2 (10.55)

15 Jun 0735 32.95 (13) 24.7 (11.7) 24.5 (11.55) + egg

17 Jun 0740 39.3 (15) 33.2 (13.55) 29.9 (13.2) + egg

19 Jun 0730<sup>Mv</sup> 50.1~~8~~ 16.5 3.3 - 3.8

K 40.75 14.95 2.5 3.0

- 40.95 14.6

21 Jun 0750 K 44.3 16.2 5.6 - 6.1

M 58 18 8.1 7

- 46.2 15.85 4.5 3 4.5

23 Jun 0635 - 57 17.1 10.9 7 9.5

K 55.4 17 11.35 8.5 10.2

n 69.8 41 19.5 15.8 13

26 Jun 0745 M 75.3 59.5 20.8 26.6 31.8 17.5 23.5

K 64 50 18 19.7 24.2 12 20

- 64.1 51 18.35 20.1 24.1 11.2 19.8

28 Jun 1235 M 79 70.5 21.65 27.1 44.2 20 31.3

- 72 64.5 19.15 28.5 35.8 15.5 27.5 + egg

K 66.9 62.5 18.7 20.6 35.9 17 27.5

30 Jun 1345 K 71.2 73 19.38 23.5 47.5 18 34.5 1627

- 76.2 74 20 30.2 47.3 16 34

M 82.5 82 22.9 27 55 21.7 37.5 1628  
1629



1988 M. Stanback

3

M. Formicivorus

L Hay

HN/HR

2 July 1450  
mw 73.5 84 20 26.5 57.8 20 40.5 27

MRO 76.5 85 20.2 25 57.2 19.5 40.7 28

BYM 80.4 92 23.85 26 66.6 18.5 44.4 29

4 July 1345  
MRO 70.5 94 20.8 24 67.5 18.5 22.5 46.5 28

BYM 77.2 101.5 24.2 20.5 74.5 22 49.3 29

MW 71.7 94 20.55 23 67 22 46 27

13 July 0845 - 1115: Census: Saw all birds listed repeatedly.  
1155, 1046, 1146, 1266, 1520, 1521, 1522. Saw  
new J <sup>MW</sup>KPK. 1522 > this juv. where's 1427? juvs?

17 July 0815 - 0950 Juv watch: saw <sup>MW</sup> and 1 other NOID  
juv. No interactions. Hot (100°)

23 July 0700 - 0915 Juv watch: saw <sup>MW</sup>/<sub>KPK</sub> = , <sup>DB-Y/M</sup> =  
1155, 1046, 1146, 1266, 1520, 1521. 1155 >> 1522.  
Saw adults go to the hole several times. At one  
point 1046 entered and later came out with a  
mouthful of fecal matter. Geez, are they going to  
nest again? They still have 1000's of acorns.  
A intruder <sup>KW/L</sup>/<sub>0 16-w</sub> chased away. (1255 from  
RAJN!)

\* 1427 at Blm 2, 1522 there too

19 Nov Set ambush - no one even came close

20 Nov Tried again - nope.

12 Dec Acorn Count: E view 3200 (E square ~35, W square = 47)

saw NOB4 ♀ chasing nuthatch / snag ~ 1450

saw 1521 and <sup>maybe</sup> RO bird

~ total

10,000

that may have been ♂(?)

191

192

193

194

195



1988 M. Stanback

1

M. Formicivorus

Central Canyon

28 Mar 1000 NOID ♂ seen sitting in big dead tree. Repeatedly chasing magpies. We approached from W, he flew E toward Ref 1.

Dec 87 Acorn Count:

27 Mar Reynolds reports bird in hole here. Is this Laguna?

28 Apr 1730 Cut hole, 3 fat & sassy babies, @ 10 days old

9 May 0500 Y&Y =  $\frac{1526}{74.5}$  (74) | MM =  $\frac{1525}{71.8}$  (68) | RBM =  $\frac{1524}{79}$  (74)

12 May 1600 RBM 88 93 23 24.5 65.5 17 44 G  
Y&Y 87 95 22.75 24 66.5 17 42 P  
mm 80 87 22 24 60.5 22 42.5 Y

4 Jun 0900 Hello'd hole - 2 juvs flushed (one was MM = )  
Also 2 other birds in tree (1 was adult)

9 Jun 1800 Hello hole - nothing

10 Jun 1540 - 1545 Watched hole from Blm Pond. Birds went in. (juvs?)

30 Jun 0630, 1030 Hello hole - nothing

1 Nov 1300 Think I saw 1525 (MM)

10 Dec Acorn Count: ~ 150 C'est la vie.



1988 M. Stanback

M. Formicivorus

Blm 1

HNHR

28 Mar 0940 Saw 3 birds (299, 1♂) One ♀ had  $\frac{Y.K}{Y.K} / \frac{Mv}{Mv}$ .

This is probably 1459 (others prob. 1325, 1167)

30 Mar 0845 Starling nest in high "nail" hole, another in one of the low holes in the next tree to SW.

Dec 87 Acorn Count: 7050

43 Apr 0900 Saw ♂ 1167. Judy saw ACW's & starlings in the hi hole in tree W of gran. Also interest in the "helper" hole in gran.

5 Apr Judy reports starlings in the hole

10 Apr 0720 Bird flushes from near "helper" hole (E fac, main gran)  
1100 No one in hole

11 Apr 1745 Spying from far away I see 2 birds go to the uncut down facing hole in the SW pointing limb in the gran. The hole has a string.

19 Apr 1800 Bird in ↑ hole

20 Apr 0930 Cut open hole (nice!) 6 eggs (5+1 runt) opaque, (hatch soon?)

22 Apr 0915 RL = 3.7 LL = 4.5 RW = 4.3 Runt egg gone. Of the 2 remaining eggs, 1 was infertile - other looked OK but not pipped. RL baby didn't look good - looked young but very thin.

23 Apr 1730 RL = 5.9 LL = 6.1 <sup>looked pale, bad</sup> RW = 8.4 + 2 eggs

24 Apr 1800 RW = 12.4 RL = 6.2 + 2 eggs. RL had its entire neck grotesquely inflated. Its mouth was open, tongue dried & shriveled. Looked like it couldn't eat and had difficulty breathing.

26 Apr 1700 20.5 (9.1) mouth was all full of wood chips + 2 eggs

2 May 1730 46 (13.7)

4 May 1645 53 (15.0)



1988

M. Stanback

2

M. FormicivorusBlm 1HNHR

8 May	1810	73.6	16.45	4.3	6.5		
10 May	1615	83.5	16.85	8.55	9.5	10.5	(2)
11 May	1730	I walked up to Far Knoll and Flushed 2 ACW's toward Canyon Vista. I checked all trees for holes & found none. Later back at the Knoll I saw 2 birds again, ♀ KWN M and NOID ♂ who flew to Blm 1. The ♀ flew to Canon Vista & chased another bird out.					
12 May	1630	83.5	42	18	13.8	17.1	12.5 17.3
14 May	1530	89	53.5	19	20.5	27.5	15 24
16 May	1710	87	66	19.9	24	39.4	17 30
18 May	1730	88	77	20.5	24	50.5	20 36
20 May	1710	87	88	21.55	26	61.5	18.5 43.5
2 Jun	1730	Bird in 87 hole. Peep ropen: 8 fresh warm eggs!					
3 Jun	0545	Put ring of tanglefoot round base of tree.					
9 Jun	1730	Set a snake net. Checked hole - still 8 eggs.					
11 Jun	1640	Still not hatched					
14 Jun	0635	" " !!					
15 Jun	0640	RL=3.9, LL=3.6, RW=4.7, LW=6.05, B=4.4, BW=7, 6.5					
16 Jun	0635	4.7, 3.0, 7.65, 9.0, 6.6, 10.35, 9.9					
17 Jun	0710	4.5, -, 11.8, 12.7, 9.0, 14.2, 14.0					
18 Jun	0705	3.75(rem), -, 14.65, 15.6, 13.3, 19.6(9.75), 19.1(8.7)					
19 Jun	0650	RW 19.1(10.15)=, LW=19.3(10) (Y) (B=16.7, BW=23.4(11) (R) 22.5(9.8)					
20 Jun	0655	G=22.9(11), Y=24.2(11), BK=19.2(10.75), R=28.5(12), M=27.6(10.7)					
22 Jun	0625	29.6(12.35), 34.1(12.45), 27.4(12.4), 38.7(13.7), 33.4(12.3)					
24 Jun	0545	38.2(14.2), 41.5(14.47), 32(14.3), 46.4(15.75), 44.7(14)					
26 Jun	0615	47.5					





1988

M. Stanback

3

M. FormicivorusBlm LHNHR

26 Jun

0615

M 52.8

15.2

3

2

4

Y 49

16.1

3.2

1.8

3.4

(R) 35.9

17.35

6.8

4.3

5.6

G 47.5

15.3

2

2

3

- 39.8

15.36

28 Jun

0625

G 52.2

16.75

7

4.5

8

(R) 61.5 38

18.85

14.4

15

9

11.2

- 42.3

16.8

4.6

2.7

4.6

M 58.4

16.6

9.5

5

9.5

Y 53.5

17.29

8.7

5.4

7.7

30 Jun

0645

(R) 64 48 19.85 17.2 25 12 19.2

- 51.5 34

17.8

10.3

5.2

9.9

G 59 39.5

18.25

13.8

14.8

7.5

14

M 64 42

17.85

16

17.8

8

15

Y 59.8 38.5

18.7

16

17.2

8.4

15

1 July

0645

(R) 66.9 55 20.55 23 30.6 13.5 23 8187

G 61.4 45

18.6

17

20

8.5

18

8188

- 55.9 40

18.45

14.2

14.7

7.5

13.5

1648

8189

Y 61.6 44.5

18.85

18.3

22.2

9.5

17.5

8189

M 66.5 47

18.15

19

23

9.2

18.5

1649

2 July

0630

Y 63.4 50 19.45 20.3 27.1 11.3 20.7

- 60.8 45

18.7

16.5

19

9.8

16.5

M 67 53

18.7

20.5

27.6

11.7

22

4 July

0820

M 75.9 63.5 19.25 27.6 38.5 17 28.5

- 67.4 56.5

19.45

21.8

28.9

13

23

6 July

0645

M 80.3 75 19.95 26.7 48.8 17 35.2

- 75.5 66.5

20.35

23.5

39

14.2

30



1988

M. Stanback

4

M. FormicivorusB/m 1HNHR

7 July

0845

76.5 73 20.5 27.5 45.5 16.7 33.3 (1648)

m 84.4 80 20.4 28.2 54.4 17.5 38.7 (1649)

9 July

0635

mm

83 89 21.25 23.5 63.9 16 44.4 (1649)

KN 72 84 21.4 26 55.4 18 39.6

11 July

0705

82.5 99.5 21.85 25 74.4 21.5 51

B649

74.8 94 22 23.5 66.5 17 46.1

1 Nov

Saw E (7) 1648

10 Dec

Acorn Count :  $3500 + 2000 + 1500 = 7000$ 

Saw 4 birds (including 1167 + 1649 RBR)



1988 M. Stanback

M. Formicivorus

Laguna

HNHR

22 May 1730 Dog my cats - bird in W facing hole in Laguna tree  
1 Flash it & hear kids. Will return to cut open

1830  $\underline{Y} = 49.5(15)$   $\underline{O} = 52.5(14)$

bird 2 Jn

Dec 87 Acorn Count:

2 June <sup>1815</sup>  
 $\underline{Y}$  85 69 20.5 22.5 43 17 31

O 80.4 76 19.1 21.3 49.7 18 33

1 July 0945-1030: Pos 10: 1457 & 1589.

1 Nov 1500 Saw 1589 ( $\delta$ ) ( $\underline{Y}$  KPN) at B/m 2

10 Dec Acorn Count: 0

\* \* Group Update \* 1589 disap 881215  $\pm$  1 m



1988 M. Stanback

1

M. Formicivorus

Blm 2

HNHR

Dec 87 Acorn Count: 1250

10 Apr 0830 Starling nest, ACW in tree top

19 Apr 1815 hello holes - nothing

26 Apr 1640 hello holes - and find some new ones, but no nest.

11 May 0800 hello holes (esp one Walt showed me) nothing

1800 Watched  $\frac{1}{2}$  hr for nestiness. Nothing. A suspicious disappearance to one tree, but I found no holes

20 May 1640, 1655 Hello'd hole - nothing.

21 May 0755 Hello hole - nothing

22 May 1630 Watched hole 5 min, bird to hole (not in) Climbed and peeped - empty. Door had big gaps so I Dapped it.

30 May 0920 I've been helloing the hole all week - nothing.

There was a bird sitting near the low holes in the dead small limb in the snaggy tree by L. Conejo.

4 Jun 0545 Hello holes - nothing

11 Jun 1500 Power Struggle: 3-4 birds, chasing, drumming, garricks

12 Jun Jane reports no unusual activity here.

30 Jun Cruised by Cañon Vista - nada.

3 July 0740 2 very bold birds here, but no scope (<sup>or was it</sup> 3 birds!?)

5 July 1510-1540 Watch - nada (2 quick visits)

10 July 0810 PID on ♀.  $\frac{L/D/L}{m}$

11 July 0715-0815 Census: ♀ 1356, ♂  $\frac{MLB}{BYN/DB-LB}$ , ♂  $\frac{RM}{OKO}$  or  $\frac{LGOKO}{LGOKO}$

The 2nd ♂ was chased by the ♀ a couple times. The other ♂ sat peacefully with him though. At one point 2 birds checked out a hole. A Laga juv sat in the sparse tree by LC awhile.





1988

M. Stanback

2

M. FormicivorusBlm 2HVHR

14 July 1245 Walking by I hear a juv. I go up to the granary and 2 birds Flush. The juv stays. Of course, I don't have binocs, but I think he is banded.

\* The new ♂ here is 1427 from L Hay. J1522 was the RM bird here with him.

9 Aug 0705 ♂ 1427 and ≥ 1 other bird here

1 Nov 1500 ♂ <sup>1589 Lagn</sup> ~~1589~~ (~~OKNO~~) here! ~~1~~ (~~Y KPN~~). Also 1356.

10 Dec Acorn Count : 1000



1988

M. Stanback

1

M. FormicivorusBlm 3HNHR

28 Mar 0845 ♂  $\frac{G-W(N)/LG}{n}$  (not a great ID, but I'm sure of the (N) and Jane's sure of the N) He was at the saddle tween Blm 3 & Raju, & Flew back to Blm 3. There's a nice new hole in the leaning tree NE of the granary. There are 2 new holes over in the "2°" granary toward the saddle.

Dec 87 Acorn Count: 3100

1 Apr 1630 Bird on limb above new hole in NE leaning tree.

3 Apr 1430 Bird<sup>(♂)</sup> at new hole in leaning tree. May have backed out.

4 Apr 0845 Checked hole - not complete yet. Could be awhile.

10 Apr 0840 Hello'd holes - nothing

19 Apr 1825 3 birds flush from the tall tree toward Blm 2. (some nice holes). No one in leaning tree hole (or others)

22 Apr 1400 Bird in leaning tree hole -

25 Apr am Walt cuts open hole - but no eggs.

27 Apr 1700 Checked hole - no eggs. Damn. Saw a ♀  $\frac{M}{KO (or OK)}$ 

11 May 0815 Hello'd holes - nothing

20 May 1645 Hello'd hole - nothing - what do you expect when you ambush the nest at night. Jesus Christ!

21 May 0800 Bird in hole - only you Walter, can have this kind of luck

22 May 1445 4 eggs. Released bird (put 2 red dots on forehead)

28 May 0830 Not yet hatched. (Didn't actually peep hole) Bird in hole

30 May 0900 Well, nice experiment. One egg gone, the other 3 cold, one cracked. 3 tail feathers in nest hole.

4 Jun 1425 Hello holes - nothing, except a suspicious flush from the W side of old nest tree

8 Jun 0830 Hello holes - nothing. 2 birds arrive in gran, see me, and fly toward 2° gran.



1988

M. Stanback

2

M. FormicivorusBlm 3HNHR

- 17 Jun 0815, 0930 Hello'd holes - nothing. Jane reported weirdness & vocalizations here the other day
- 19 Jun 0815 Nest! In traditional tree, new hole on back side. 4 opaque eggs. Needs to be opened  
1500 Cut open. Eggs aren't really opaque - they are borderline t'lucet/opaque (on the t'lucet side)
- 26 Jun Hello - no one in hole
- 27 Jun 0940 hello - nothing. Climb - 4 eggs. Open - not cold.
- 28 Jun 0745 " " Hit limb w rock - hear no babies
- 29 Jun Did I miss it yesterday - should have climbed  
0825 RL = 7.4, RW = 7.15, LW = 4.0 4th egg seemed to be pipping - was capped by another egg shell. I opened the pip a little - detected no movement and the chick inside wouldn't pip back at me.
- 30 Jun 0810 RL = 8.8, RW = 8.55, LW = 3.9 The other egg progressed no further. I guess it was dead yesterday. I removed it
- 1 July 0805 RL = 10.99, RW = 8.99, LW = 4.35
- 2 July 0720 12.7 11.5 4.25
- 3 July 0730 14(9.1) 13.9(8.25) → gone
- 4 July 0800 RL =  $\overline{PB}$  = 17.7(9.82) LL = R = 16.35(9.0)
- 6 July 0715 21.35(10.85) 20.2(10)
- 8 July 0715 24.85(12.3) 21.75(11.6)
- 10 July 0755 31.4(13.75) 25.5(13.25)
- 12 July 0755 38.5(14.6) 26.4(13.85) dead - removed
- 14 July 0640 38(15) looked bad. Should've brought food.  
1130 Stuffed him full of dog food





1988

M. Stanback

3

M. FormicivorusBlm 3HNHR

23 Oct Jane reports 5 birds (+ 2 more that couldn't get in) roosting in the first 88 nest hole.

24 Oct 1 set ambush, but only 1 bird goes in (no others even visit)

25 Oct 0730 Taking down ambusher I notice that the birds here are very bold & vocal. 5 sat in 2<sup>nd</sup> nest tree while I just stood there (also heard more in another tree. So there's been a power struggle - & they're still getting to know e/o.

- More roost watches - always just 1 bird

1 Nov 1500 Noba ♀ at granary. Set ambush

2 Nov 0600 Ambush! Caught ♀ 1377 (seen by Jane here and not previously seen since LHay P.S. (198~~8~~)), caught 2 NOBA ♂♂ (now 1675 & 1676). I think there are still birds to be caught here (is a PS still going on here?) Blood + plasma.

5 Dec 0600 Ambush! NOBA ♂ (now 1678) in 88a hole. I also set ambush at the "lower hole" of the pair in the traditional tree - a bird went in, but I then turned to watch the 88 hole. There was no one in the traditional hole this am - either because it left last night or escaped this morning thru the upper hole - to which the lower is now connected.

10 Dec Acorn Count: 3 way <sup>- some</sup> = 2700  
Saw ♀ 0?



1988

M. Stanback

1

M. FormicivorusGAZOHNR

28 Mar 0830 Bird in hole in balancing limb tree (to w). Hole is highest in tall vertical limb. ~~NE~~ NE facing

Dec 87 Acorn Count: 5390

LED 421

1 Apr 1600 Well. Babies. This means FED @ 17 Mar! They hatched today. Incredible. Bad cut.

2 Apr 1600 RL = 6, LL = 8.8, RW = 7.6, LW = 7.5 clutch 4(?) hatch 4

3 Apr 1615 8.2 11.75 10.4 10.5

4 Apr 1600 11.6 15.75 13.0 14.1

5 Apr 1550 14.1 20.3 (9.5) 17.8 16.9

6 Apr 1550 18<sup>P</sup> (10.15) 24.4<sup>G</sup> (10.5) 21.5<sup>R</sup> (10.2) 21.2<sup>S</sup> (10.5)

7 Apr 1610 21.75 (11.1) 30.6 (11.7) 26.8 (11.4) 25.9 (11.5)

8 Apr 1550 25.3 (12.15) 33.5 (12.6) 31.4 (12.4) 29.5 (12.4)

9 Apr 1545 32.5 (shif) 41.75 (13.8) 36.5 (13.25) 34.5 (13.3)

10 Apr 1545 38.1 (13.95) 44.4 (14.7) 41.4 (14.2) 38.0 (14.3)

11 Apr 1545 44.5 (15.3) 47.7 (15.5) 47 (14.9) 43.5 (15.15)

12 Apr 1540 50.2 (16.15) / 55.3 (16.15) 3.2<sup>P</sup> (3.4) / 52.2 (15.8) 3.0 / 49.5 (16) 2.8 (2.3)

13 Apr 1525 ~~Wt~~ Wt Bill 6<sup>th</sup> 1<sup>o</sup> TS T

P 52 17 3.3 2.4

G 58 16.9 5.7 4.1

S 53.2 16.8 4.5 3.2

R 55 16.5 5.8 3.0

14 Apr 1640 S 54.8 17.6 7.5 3.6

P 55.6 17.8 5.5 3.35

! → G 51.3 17.8 8.5 4.8

R 59.9 17.5 9.2 3.5

15 Apr 1510 G 66.2 18.3 11 4.8

S 58 18 10.75 4.3

P 58.9 18.6 8.3 4

R 60.9 17.8 13.15 4.6



1988

M. Stanback

2

M. FormicivorusGAZOHNHR

17 Apr

1645 wt clor Bill l's l' TS T

P 67 19.5 16.2

S 69.8 18.9 17 19

R 71 18.4 20.3 22

G 75 19.3 17.7 19.4

18 Apr

1515 ~~70~~ 71.5~~S~~ 70~~P~~ 72.8

R 72.8

G 75.6

19.55 21.1 23.2

19.55 19.3

19 22 26

19.6 21 23.5

cleaned  
nest(due to door  
leakage?)

20 Apr

1515

R 75.2 62.5 19.6 26.7 36.2 10.7 22.5

P 76 55 20.3 22.2 29.1 11.9 19.2

G 81 60 20.2 20.5 33.3 13.7 23.3

S 76 60 20.5 25 33.7 10.3 21 blood

23 Apr

1500

P<sub>r</sub> 79 72 21.25 28.1 47.5 16.8 29.8 (2)G<sub>r</sub> 88.3 76 21.2 24 50 17 32 (1)S<sub>r</sub> 80.8 77 21.1 32.5 50.6 16 32.3 (3)R<sub>r</sub> 81 78.5 20.4 24.7 52.7 14.4 33.3 (4) $G = 1470 = (1) = 34.5, \frac{27.5}{89}$  $P = 1471 = (2) = 28, \frac{24}{89}$  $S = 1472 = (3) = 35$  $R = 1473 = (4) = 36, 34, 34$ 

25 Apr

1650

S 85.5 88 21.65 28.2 61.1 14.8 38

P 85 84 21.8 24.7 56.1 18.3 35.9

R 86.5 90 21.3 27 63.6 19.2 40.5

G 91.5 86 22.25 25 60.2 20 34

27 Apr

1500

S 84.5 99 22.5 24.5 71 19 44.3

R 86.3 100 21.9 27.1 73.7 23.3 46.7

G 89.9 96 22.85 21.8 69.2 18.5 43.3

P 84 93 23 27 65.4 18.5 43



M. FormicivorusGAZOHNHR

$$1470 = \frac{WM_v}{LG} \bigg/ \frac{M}{RW(N)} = K + R \text{ butt}$$

$$1471 = \frac{R \cdot DB}{M} \bigg/ \frac{LP}{M_v} = \text{no paint}$$

$$1473 = \frac{R}{K} \bigg/ \frac{M}{DB-Y(N)} = \text{black butt}$$

$$1472 = \frac{O}{K \cdot O} \bigg/ \frac{LB-BP}{M} = \text{red butt}$$

20 May	1615	Checked Walt's new hole here. Only 1/2 left				
22 May	1600	Watched for nestiness - nothing (@ 15 min)				
	1700	Hello'd holes - nothing				
28 May	0900	Hello'd holes - nothing				
2 Jun	1515	Hello'd holes - baby in the knot play hole. He flushed & I got bands $\frac{M/DB}{R-LB/RO/N}$ . Umm - now why doesn't he match up? Because he flew to another bird.				
4 Jun	1000	5 Fresh eggs. Hole was a <u>bitch</u> to saw open.				
9 Jun	1615	Hello hole - no one home. Damn, I hope they don't abdn.				
11 Jun	1450	Good! Bird in hole (adult).				
15 Jun	0615	Damn! $RL = 10.05$ , $LL = 8.2$ , $RW = 7.75$ , $LW = 9.35$ , $B = 5.35$				
16 Jun	0615	<sup>3.35</sup> 13.4	11.2	<sup>2.75</sup> 10.5	<sup>3.45</sup> 12.8	5.55
17 Jun	0645	<sup>17.2</sup> <del>17.2</del>	14.1	13.8	16.3	6.05
18 Jun	0635	<sup>0</sup> 21.7(10.85), <sup>DB</sup> 18.9(9.91), <sup>LG</sup> 18.2(10.1), <sup>P</sup> 20.65(9.1), 7.78				
19 Jun	0615	<sup>3.85</sup> 25.55(11.8), <sup>3.2</sup> 23(11.15), <sup>2.75</sup> 20.95(11.2), <sup>3.45</sup> 25.6(10.05), <sup>1.7</sup> 8.95				
20 Jun	0625	<sup>4.95</sup> 30.5(12.95), <sup>3.2</sup> 26.2(12.05), <sup>3.45</sup> 24.4(12.1), <sup>5</sup> 28.9(11.4), 9.45				
22 Jun	0700	41.4(14.25), 34.1(13.9), 32.55(14.1), 37.55(13.3), 11.99				
24 Jun	0615	50(15.85), 42.8(15.6), 39.45(15.45), 45(14.65), 13.0				
26 Jun	0700	<sup>G</sup> 50.4	16.9	5.9	-	3
		B 50.1	16.65	4	2.3	3
		O 57.9	17.15	9.5	5.4	8.1
		P 55.8	15.95	7.6	5.2	6.7
		- 14.5	12.1			





1988

M. Stanback

4

M. FormicivorusGAZOHNHR

28 Jun

0718

G 56.4 37 17.8 11.85 12.3 6.8 9.5

B 59.9 34.5 18.15 11 6 9.1

O 65.4 43.5 18.4 15.3 17.6 8.8 14.5

P 60.5 41 17.25 15.1 7.1 12.3

- 15.1 12.95

30 Jun

0735

P 70.4 50.5 17.9 19 24.2 11 18

B 67.9 45 19.05 16.5 19.5 10 16.5

O 70.5 55 19.15 21.3 28.3 13 21.5

G 64 48 18.6 17 21.6 9.8 16.5

- 15.1 (inj) should've brought my camera

1 July

0725

O 73.8 61.5 19.4 26 33.6 12.5 25 brought camera

G 68.8 53.5 19.02 19.5 26.9 12.4 20 runt

B 70.2 51 19.3 17.3 24.9 12 20 gone

P 75.1 57 18.4 21.7 29.6 12 21.9 shit

3 July

0645

P 76.4 67 19 24 40.3 15.5 28.2

LG 69.5 64 19.95 24.7 38.2 17 26.5

O 76.8 72 20.3 28.2 44.3 17.5 32

B 72.9 64 20 24 35.1 17 27

5 July

0820

G 71.8 75.5 20.75 26.3 49.6 18.5 33.7 1642

O 76 83 21.2 30 55 21.7 38.2 1643

B 76.5 75 21 26.1 46.9 18 33.5 1644

P 77 77.5 19.6 25.5 51 17.2 34.4 1645

7 July

0800

PM 83 88 20.25 25.5 61 17 40.3

MV 79.5 85.5 21.55 26.5 57.5 18.5 40.4

NO 81 93 21.5 29 66 22.5 44

KPK 77 86 21.1 26 60.5 19 40



1988

M. Stanback

5

M. FormicivorusGAZOHNHR

9 July

0725

Pm 81.5 96.5 21.45 22.5 70 16 46

MN 80 95.5 22.4 27 68.2 19.5 46.8

KPK 74.5 96.5 21.95 25.7 70.3 21 45.5

77 103 22.3 26 75 18 50.5

10 Dec

Acorn Count: 1<sup>o</sup> tree : 3100saw: B<sup>?</sup>W/M ♂ 88b nest : 850

1415, 1473,

stump : 260

1642, 1644m

downhill snag : 220

88a nest : 150

SW tree : 500

5070



1988 M. Stanback

M. Formicivorus

CVGR

HNHR

30 Mar 1100 2 birds to 87b hole within a couple minutes

Dec 87 Acorn Count : 6445

1 Apr 1500 N. Popkin saw 837  $\left(\frac{mlo}{o-w/w}\right)$

1540 4 warm opaque eggs in 87b hole!

3 Apr 1400 1: 24.9 x 18.95, 2: 24.2 x 19.55, 3: 25.65 x 19.25  
4: 25.15 x 19.25

5 Apr 0730 Covered hole - heard no kids (didn't actually check eggs)

6 Apr 1130 RL = ~~4.7~~<sup>6.5</sup>, LL = 4.2 Eggs 2 + 3 not hatched

7 Apr 1630 10.2 ~~8.4~~<sup>4.75 9.5</sup> 6.25 5.1

8 Apr 1615 13.3 11.5 ~~8.8~~<sup>2.55</sup> 8.25

9 Apr 1615 16.6 14.5 12.9 12.2

10 Apr 1615 20.9 (R) 19 (Y) 15.4 (S) 16.9 (B)

11 Apr 1615 25.5 23.6 19.6 21

12 Apr 1610 <sup>31.4</sup> 31.4 (11.35) 27.75 (10.7) 24 (10.25) 26 (inj)

13 Apr 1550 34.9 (12.25) 32 (11.65) 27.4 (11.6) 29 ~~30~~ ( )

14 Apr 1700 37.5 (13.0) 37 ( ) 32.2 (12.8) 32.6 (11.3)

15 Apr 1540 40.4 (13.8) 39.9 (13.1) 34.6 (13.45) ~~37.2~~<sup>37.2</sup> (12.05)

17 Apr 1710 50.7 (15) 4 (3.5) 51 (15) 46.1 (15) 46 (13.5)

18 Apr 1550 56 (15.4) 6.7 (4) / 53.8 (15.7) 6.1 (3.5) / ~~48.8~~<sup>50.9</sup> (15.7) / 48.8 (14.2)

20 Apr 1600 Wt Bill 1° 1° TS T Chor

B 57.8 16.05 8.4 - 4.3

R 65.4 16.6 12.5 7.2 11.1

Y 63.1 17 12.3 7.8

S 62.9 17.3 7.1 4 6.6

22 Apr 1550 S 73.8 18.8 15 8.8 12.5

R 75.7 17.4 20.6 23 13.3 19

B 68.4 17.5 15.8 9 10 → 2<sup>nd</sup> 1° big!

Y 74.2 17.9 18.5 22 9 15.5

what do other  
melanerpines do?

all

W. ✓

W. 200

2

M. Formicivorus

HNHR

24 Apr	1530	wt	Char	Bil	lsh	<del>10</del> 10	TS	T
	B r	52 <del>14.5</del>	18.4	21.7	25.9	10	16	
	Y l	60	19.4	24	<sup>32.5</sup> <del>4</del> 32.5	12.5	22.5	
	R r	60	18.3	25	34	14.5	26	
	S l	50	19.4	20.5	24.5	11	20	

26 Apr	1430(R)	86	72	19.1	24.1	45.4	19.2	33.3
	S	88.8	62	20.55	30	35.7	14	25.3
	B	77.5	63	19.3	25.6	36.5	13.2	24 (2)
	Y	87	71	20.5	29.5	43.8	16.5	29

	1500 <sup>R</sup>	86	82	20.2	25.9	58.2	24.2	39.2	1
28 Apr	B	79.5	75	20.75	24.4	48.2	16	28.7	2
	S	91.4	74	21.4	29	47.4	20	33	3
	Y	88	82	21.2	25	54.6	19.3	35.4	4
	R = 1479 : 51.5, 51.5, 51.5								
	B = 1480 : 43, 42.5, 43								
	S = 1481 : 44								
	Y = 1482 : 48.5, 48, 48.5								

30 Apr	<sup>1515</sup> B	78	87	21.65	27	59.2	19	34.8	
	R	85.5	97	21	24.5	68.2	21	46.5	
	Y	87.5	92	22.7	29	64.5	20	42	
	S	92	88	22.4	25	58.5	20	39.5	butt m

	1600								
20 May	Y	88	102	23.45	22.2	74.2	16	47.5	green 33
	R	85.3	104	22	23.7	78	18.5	54	yellow 32
	S	89	95	22.9	24.5	68	17	45.3	pink 35
	B	79.3	97	22.6	24.5	69.2	18.5	41.2	blue 34
	1479 = R =	$\frac{BWN}{m} \bigg  \frac{R}{wm}$				= yellow			
	1481 = S =	$\frac{DB \cdot LB}{LB} \bigg  \frac{m}{W \cdot BP}$				= pink			
	1480 = B =	$\frac{m}{R \cdot LG} \bigg  \frac{DB}{RON}$				= blue			
	1482 = Y	$\frac{Mauve}{KLG} \bigg  \frac{m}{Y}$				= green			





M. FormicivorusCVGRH/NHR

17 May 1400 Bird to 876 hole. Peep. 2 eggs, but they've deepened it and I can't reach. Gopher snake stuck in netting. I released it in Creche Cañon

19 May 1430 4 eggs - put in chips so I can reach eggs

21 May 1015 5 eggs - Another big gopher snake caught in netting. Theory - later nests should have move entire clutch loss, but less brood reduction. A trade off.

30 May Jane reports Feeding this afternoon

31 May 0710  $RL = 4.6$ ,  $LL = 3.55$ ,  $RW = 5.05$ ,  $LW = 5.2$  yesterday??

1 Jun 0610 7.7 6.22 8.35 7.58 3.6 (From last laid egg)

2 Jun 0615 11.85 8.6 13.0 10.5 3.9(-)

3 Jun 0615 15 12.15 16.8 12.9 5.0

4 Jun 0630  $18.1^B(9)$ ,  $14.6$ ,  $20^M(9)$ ,  $15.9$ , 7.65

6 Jun 0640  $24.3(11.4)$ ,  $Y = 19.8(11.25)$ ,  $25.6(11.2)$ ,  $18(11) = 0$ , 9.1

Frost! 8 Jun 0625  $B = 31.7(13)$ ,  $Y = 26.8(12.7)$ ,  $M_v = 31.2(13.1)$ ,  $O = 28.55(12.75)$

10 Jun 0705  $41.4(14.5)$   $34.5(14.3)$   $44(14.6)$   $38.6(14.5)$

12 Jun 0700<sup>M</sup> 54.6 16.1 3.4 - 3.4

O 46.9 16.05 1.5

B 51.5 15.8 2.3 2.3

Y 43.8 15.8 1.8

14 Jun 0900<sup>DB</sup> 68 17.4 7.8 4.5 7.5 (2)

O 63.5 17.3 4.8 4 5 (2)

Y 61 17.2 4 - 5.2 -

$\bar{m}$  72 17.5 10.4 - 8.6 -

16 Jun 0735 Y 64.6 18.7 9.3 5.2 10

O 69 18.6 12.1 5 10.6 2

B 76 41.5 18.7 13.1 14.2 9 13 2

M 78.8 44 19 17.1 18 12 15.3



1988 M. Stanback

4

M. Formicivorus

CVGR

HNHR

18 Jun

0515

Y 66.4 43 19.5 15.3 17.6 10.3 16.4

DB 76 54 19.8 20.3 24 10.8 18.8

m 79.3 56.5 19.8 21.3 28.8 15 22.5

O 69.6 47.5 19.8 17.9 20.3 11 17.3

20 Jun

0805

Y 76.3 56 20.7 21.5 28.5 13.5 24

O 78.9 60 21 22.5 31.5 13.5 24.5 (2.5)

M 85.6 70 21.15 25 41.5 18.3 30

B 87 66.5 21.2 21 37 14.2 26.9

22 Jun

Y 79.4 66 21.45 23.7 39.5 16 31

B 86.5 77 21.8 27.5 48.5 18 34

O 82 70 21.7 24.2 42.9 16.5 32

M 88.6 80 22.15 30 52.5 21.5 36.6

24 Jun

0650

BWM 84.8 88.5 22.8 25.5 60 20 40

GBY 77.8 77 22.25<sup>inj</sup> 27 50.4 20 37.3

PKV 78 80 22.85 24.3 53.3 17.5 38.5

OBM 84.6 91 22.8 24.5 63 17 42.6

26 Jun

1035

PKV 81.3 93 23.45 21.3 64 17.5 45.7

OBM 84.4 101 23.41 23.5 73 18.5 49.1

BWM 90 99 23.5 27 72 20 47.5 bald

GBY 79.8 97 23.4 27 61.7 24 43.5

10 Sept

0815 : 1482 is ♀

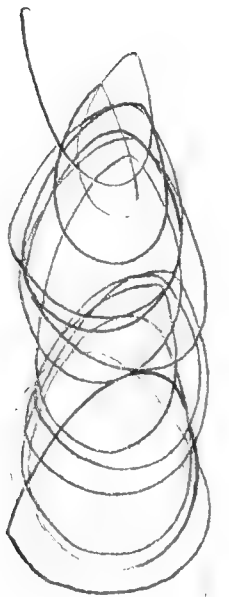
16 Nov

1030 : LBK/Y (1613 is ♂)

6 Dec

Acorn Count: view From W + bare side = 3467  
(est 6600) E view = 2450

6600



1988 M. Stanback

M. Formicivorus

MURF

HNHR

30 Mar 1105 Starling Flushed From near Cindy hole (was seen sitting near it earlier) ACW Flush near 86 b hole

Dec 87 Acorn Count: 7500

2 Apr 0840 - 0905 Watched Murf from CV pond. Saw birds go to back of tree thrice. Checked Nest. Out on the end of the limb that the 86 a nest <sup>limb</sup> was/is attached to. Bees must go. 1500 Cut open hole - 8 eggs!

Experimental Group: Walt removed B ♂ <sup>1 white w/o incub</sup>

8 Apr 1630 2 hatched, each 3.9 g

9 Apr 1640 RL = 7.05 LL = 7.0 RW = 6.15 LW = 6.1 B = 4.8

1 accidentally <sup>nicked</sup> the head of ♂ putting him back in.

10 Apr 1640 RL = 9.75 LL = 9.1 RW = 6.9 LW = 7.4 B = 7.2 n = 4.2 There was a dead hatchling (still attached to egg) wt: 3.0 g. It had been pecked on the L foot & L wing, with multiple pecks at the back of the head.

11 Apr 1640 13.2 13.4 10.9 12.1 ~~10.6~~ 3.6

12 Apr 1640 16.25 15.4 13.9 15 14.9 5.35

13 Apr 1630 18.9 (N) <sup>17.2</sup> 15.5 (R) 16.9 (E) 16.1 (B) 4.55

15 Apr 1630 23.2 (10.3) 20.8 (10.6) 21 (10.9) 20.3 (9.5)

17 Apr 1740 29.1 (11.5) 25.7 (12.25) 28.2 (12.3) 28.9 (10.9)

18 Apr 1630 30 (11.9) 29.6 (12.8) 30.7 (12.95) 30.4 (11.4)

20 Apr 1640 36.2 (13.2) 34 (14.2) 38.7 (14.4) 38.3 (12.8)

22 Apr 1630 46.3 (14.6) 44.4 (15.45) 46.2 (15.6) 48.3 (14.35)

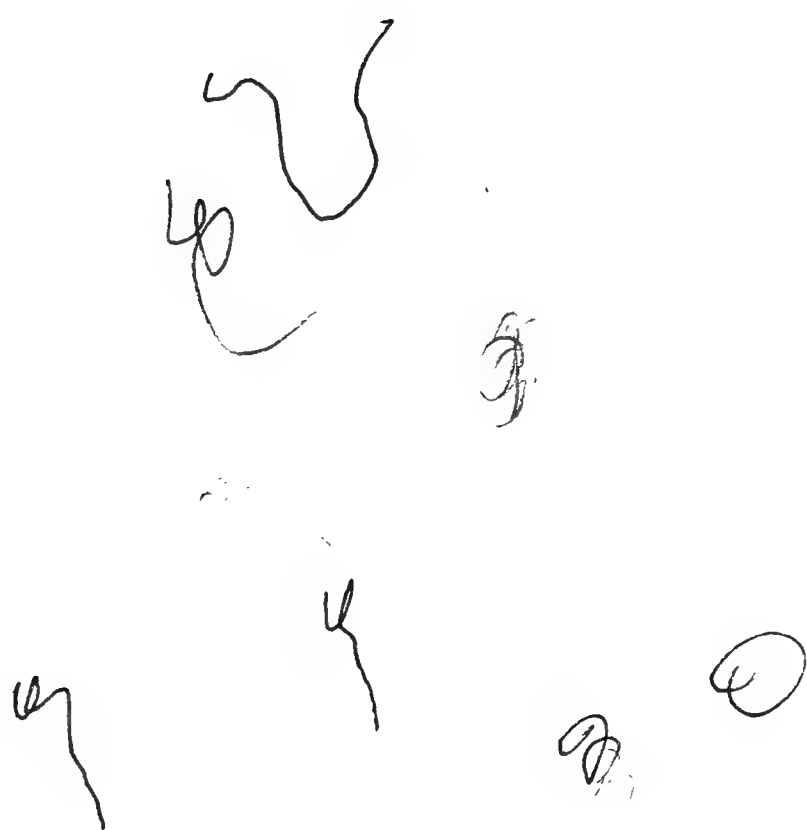
25 Apr 1600 58.5 (15.9) 4.4 (1.8) / 56 (16.8) 7.8 / 60.8 (17.5) 8.1 (3.1) / 60 (15.65) 4.8

27 Apr <sup>1200</sup> YG 70.3 41 18.75 15.1 16.1 7.7 11.3

B 69.9 36 17.1 10.6 - 3.3 5.2 (3)

KPN 68.1 37 17.05 12 - 6.1 9.5 (2)

- 67 38 18.1 14.4 14.8 9.7 13.2



1988

M. Stanback

2

M. FormicivorusMURFHNHR

29 Apr

1810

N 74.2 48 17.65 19 21 10 16.3 (3)

- 74.8 51 19.15 20 26.2 12.5 20.2

Yg 73.9 53 20 20 26.6 11.4 18

Bb 75.1 48 17.8 16.6 21.9 6.7 11.5 (2)

1 May

1600<sup>N</sup> 75 58 18.7 24 31.8 12.6 22.4 (3)

B 76 57 18.8 23 31.4 11.4 18.5 (3)

- 73.5 63 20 28.5 36.9 14.2 27.2 (4)

G 71.3 63 20.4 24 38 14.8 24.8 (1)

1483

G = 45, 45

1484

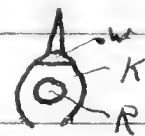
B = 40, 40 (38, 38 at blood line - a small layer in between)

1485

N = 47, 46 (44, 1st tube had wierd middle layer)

1486

- = 42, 26/65 (40 - had small middle layer)

1483 = Yg =  $\frac{M \cdot DB / R}{m \cdot Y \cdot LG}$  = Pink1484 = B =  $\frac{W \cdot DB \cdot LB}{m \cdot O \cdot LB}$  = Green has black on forehead1485 = N =  $\frac{BP \cdot W \cdot KP(N)}{LG \cdot m}$  = Yellow has lots of black on forehead (red is a patch)1486 = - =  $\frac{DB \cdot Y(N) \cdot m}{LB \cdot DG}$  = Blue

5 May

1400

B 79.7 81 20.6 26 53.8 16.5 31.4

- 79.7 86 21.5 28.3 59 18.4 39.5

Yg 79.1 85 22.4 24.7 58.5 16 37.8

N 77.5 82 20.1 28.3 54.4 18 36

Painted  
butts  
today

19 May

1700 Jane reports adults playing in 86 b hole

21 May

0930 Put up new string &amp; check hole - 2 eggs (#2 is runt(?))

22 May

1515 Numbered eggs 3 (normal) and 4 (another squat like 2) 2 inf





1988

M. Stanback

3

M. FormicivorusMurfHNHR

23 May 1430 #ed eggs 5 + 6 (normal + short)

4 Jun 0710 RL = 3.85, LL = 4.2. I found shells 1 + 3 below the nest, # 3 was freshly hatched. As all the big eggs were the same size, RL = egg 3, LL = egg 1. Egg #6 is pipping. Egg 7 not yet pipped. All 4 small eggs were thrown out of the nest! Was this because they were so small? Or because they belonged to the dead ♀ and thus were fair game? Can birds identify their eggs? I don't think I noticed this egg size disparity in the 1st nest. Maybe the dead ♀ was stressed out anyway at the onset of this nest (hence small eggs and death upon captivity) Does this address birds manipulating clutch size in accordance w group size/weather?

6 Jun 0710 RL = 9.4, LL = 8.15, RW = 5.65. RW was from egg #7 (ie last laid + hatched) He hatched recently + was, for now, healthy. Egg #6 (was pipping) hatched, died, and was removed by birds (this is what I assume)

7 Jun 0710 RL = 11.8 RW = 6.42 LL is gone!

8 Jun ~~07~~ 0700 Nest empty. He thinks 'twas predation. This explains the one by one disappearance of kids. If, say, a mouse was the culprit, would this explain the missing small eggs (ie the ones it could carry?) Anyway, I think this nips in the bud the great ♀ egg recognition hypothesis. By the by, this nest has been mite ridden all along.

23 Jun 0800-0815 Spied from afar. No sign of nestiness. I was watching from CV2 when Murf juv 1485 showed up. See CV2 notes.



1988

M. Stanback

4

M. Formicivorus

MurF

HNR

27 Jan 1980 Watched 88b hole/tree for 20 min, then 88a hole/  
tree 20 min, then 87 Cyrdy hole 15 min - no  
interest anywhere. I then helled + I think a bird  
flushed from the 88a hole (but o<sup>f</sup> course, it could've  
been a juv.

29 Jun 0935 - 0950 Watched 88 a hole + environs - nothing.

3. The other - 7000 - 7000

- one 85 tree, but flew away w/o going in

No other real hints. Afterwards I belled holes - nada  
1000 checked ~~some~~ <sup>to</sup> high up on the knoll summit.  
Climbed and hand covered the one hole up here (no kids)  
but didn't have peeper. Saw PID (+ ID) 967, 1486.

8 July 1845 - 1920 Helio's holes, then spied from distance - rada.

9 Aug 1015-1045 Sat under tree + census: 967, 1486.

1486 may be a ♀ (check cap record to see if this was the baby w ♀ plumage). I saw a bird with ♀-ish plumage that had a messy forehead etc, but I didn't see its legs. So its either a nest missed, or just a messy juv (which these were)

15 Dec Acorn Count: 88 a nest tree: 5400

6400/-

(saw 967 and a bird (? ? ?) w RWNM) 55% " " 100% Saw everyone! 966, 967,

Saw everyone! 966, 967, 1144, 1338, 1485, 1486.



1988


M. Stanback

1

M. FormicivorusCUIHNHR

30 Mar 1130 Bird at syc slit-hole

Dec 87 Acorn Count: 4500

2 Apr 1115 You can see down the hole - its ready to go, but how to cut it open.  Its at least 6" thick from all sides.

8 Apr 1700 4 eggs - couldn't reach 'em.

9 Apr 0915 Widened the hole a little, enough to get my hand thru the narrows, but then my forearm stuck there before my hands reached the eggs. There are not 4, but 9 eggs! By using the mirror, you can see the ones I missed yesterday. They are opaque.  $\Rightarrow$  Even though it widens out, I don't think I could cut.

10 Apr 1000 Cut new door, but I Fucked up and punctured 2 of the eggs. Look, no one is more upset about this than I am - this was going to be great brood reduction. I'm punishing myself. Both eggs were removed - both fertile - incub @ 7 days. Well, we can still get hatchability data (2+x) and number fledged (there will still be brood reduction).

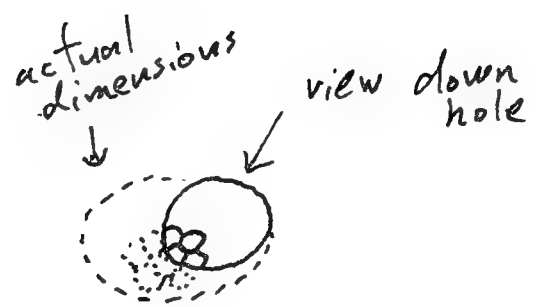
13 Apr 1440 Well shit, they've hatched - and it looks like they hatched on 11 Apr - or started then - I can only assume that the 2 eggs I broke were runts (I actually only opened 1 of them - I need to check the other.) So 9 laid, 9 hatched (a record?) Very synchronous too. RL=7.6 LL=9.0 RW=9.35 LW=7.8 B=12.7 BL=9.4 r=4.0

14 Apr 1515 RL=10.3 LL=11.3 RW=12.4 LW=9.8 B=16.5 BL=11.6

15 Apr 1515 12.6 14.2(5) 14.0 11.8 18.1 10.5 <sup>by self</sup>

BL was apart from the others when I opened, but after wt, I lumped all.

17 Apr 1600 17.5(9.05)=B/19(8.2) G/-/16(8.7) 0/22(10.8) w/11 butt cut <sup>back</sup>



M. Stanback

M. Formicivorus

## CVI

H N H R

18 Apr	1430	$\underline{G} = 20.8(8.8) / \underline{O} = 17.3(9.5) / \underline{W} = 23.3(11.4) / \underline{B} = 20.1(9.8)$
20 Apr	1420	27.5(10.7) 19.8(10.75) 28(12.65) 26.1(11.3)
22 Apr	1400	32.4(11.85) 23.8(11.9) 31.2(13.8) 30(12.45)
25 Apr	1440	39.4(13.6) 29.0(13.25) 36.4(15.05) 38.9(14.15)
27 Apr	1615	51.9(14.75) 38.7(14.3) 47.8(16.05) 50.9(15.2)
29 Apr	1645	59.4(15.7) 3.7 / 47(15.3) / 59(16.75) 5.8 = $\underline{B} / \underline{W} = 53.4(17.2) 7(2.7)$
3 May	1600	0 64.2 32 17.2 9 - 41.9 -
	B	71.9 44 18.3 17.7 19.5 8 12.3 (2)
	G	73 40.5 17.6 15 17 6.8 11
	W	68.5 45 18.8 16 20.5 10.1 14.1
9 May	1300	Gm 81 76 20 26.2 49.6 16 19.5 pink <sup>1498</sup>
	0	NO 78.5 61 19.3 25 35.5 14 20.5 green <sup>1496</sup>
	B	MYR 82.5 76.5 20.8 26 50.5 17.5 31.8 yellow <sup>1497</sup>
	W	RWB 80.8 <del>21.7</del> 21.2 28 51 17 33.3 blue <sup>1499</sup>
11 May	1400	1497 80.3 88 21.7 25 62 19 38.3
		1498 81.6 88 20.4 24 61.4 18.5 36.5
		1499 83 86 21.95 23.3 61 14.5 40.5
		1496 80 72.5 20.2 25.5 46.5 12.5 26.3
23 May	1500	Bird Flushed From plug. bottom hole in granary
28 May		checked hole w peeper - no nest, nor will there be one in this hole - the plug isn't complete, so there's a hole in the bottom of the hole
2 Jun	1605	♀ in new hole on E side of sycamore.
3 Jun	0700	NOID bird in same hole (no one in at 0630)
4 Jun	1330	Juv <u>O.G/M</u> . Checked hole - no eggs.
8 Jun	0730	No one in hole
	0840	Bird in hole, another <sup>(♀?)</sup> came & replaced it (watching from dist)





1988

M. Stanback

3

M. FormicivorusCVIHVHR

(8 Jun) 1600 Climbed hole - 4 Fresh eggs! But cutting is a chore. 6" thick live sycamore. I make less than 2 of the cuts and that takes @ 1 hr. I blow out as much sawdust as I can before coming down (but 2 of the eggs are still covered) Sorry, but I'd be up there 2 hrs.

9 Jun 1530 They didn't seem to mind - they laid 2 more eggs. I finished the cut and marked all 6 eggs (2 seemed Fresher so I marked them as such. There was a runt egg (the 6<sup>th</sup>). I removed it - things are getting tight in there and I want no wasted space. (when was it laid)

14 Jun 0930 Oh shit. I candled the runt egg and saw no yolk, so I blew out the contents - and found a yolk (this was on 13 Jun) On 14 Jun I climb hole and see they didn't lay more eggs. Since they had 9 the first nest I figured they'd lay 8 in this. \* So, final clutch = 6. However, I removed small egg  $\therefore$  5, and now I see that they removed an egg, so clutch is now 4.

20 Jun 0835 RL = 4.3

21 Jun 0900 RL = 6.1, LL = 4.6, RW = 4.4, LW = 4.6

~~22 Jun 0845 8.58 6.22 4.78 6.25~~

22 Jun 0745 8.58 6.22 4.78 6.25

23 Jun 0735 9.6 7.38 5.3 7.8 what's going on here?

24 Jun 0730 11 9.5 4.7 9.55

26 Jun 0835 17.2 (9.65), 14.2 gone 13.8

28 Jun 0815 23 (11.5) = O, 21.9 (10.85) = B, 19.6 (10.6) = W

30 Jun 0820 29 (12.9) 28.1 (12.3), 24.2 (12)

2 Jul 0745 37.3 (14.15) 36.6 (14.1) 31.7 (12.3)



1988

M. Stanback

4

M. FormicivorusCVIHNR

4 July 0725 B = 47.2 ((15.45)), W = 42.4 (14.9), O = 47.3 ((15.5)) 3.5 (2) 3

6 July 0740 B 56.3 (16.1) 5.2 2.8 5.4

W 50.55 15.8 5.2 2.8 4

O 58 16.2 9.1 4.5 7

There's a family of Cooper's hawks here (∴ bye babes at CVER, MURF, CVI) I heard a bird scream (I don't think ACW, but could have been) and soon after saw a Coopers hawk leaving the CVI granary w a largeish bird "in tow" (my guess a towhee). Soon after heard hawk begging, Up the hill from the curve Gazebo.

8 July 0645 63 36.5 17.5 12.3 6 10.7

O 63 43 (17.15) 17.3 17.5 10 13.3

W 56.3 35.5 ((16)) 12 - 4.5 8.7

10 July 0715 B 70.9 48.5 18.55 18.9 20.7 11.5 18 (2)

W 61.9 48 (17.1) 19.7 21 9 14.6

O 67.4 55 (18) 23.5 28 11.3 20.1

12 July 0720 O 66.9 66 19.64 24.5 40 15 27

B 67 59.5 19.46 23 32 12.7 24.3 (2.5)

W 62 59.6 (-) 24 32.1 11.4 21

14 July O 69 78.5 20.5 27.6 51.65 17 32.6 PKW

W 58.8 68.5 19.7 26.8 41.5 12.5 26.6 NW

B 66.5 70 20.3 26 43.4 14.2 30.8 MKG

16 July 0700 NW 65 79 (20) 22.8 51.3 17.1 32

MKG 67.4 80 20.95 26.7 52.3 18.6 36.6

PKW 68 89 20.85 22.5 62 18.5 37.8

18 July 0700 NW 69.9 89 21.05 25 61.8 17.5 38.4 P

MKG 65.2 89.5 22 24.5 62.9 16.5 42.5 Y 2.5

61.1 97 (22.2) 23.5 71 19.5 43 G



1988 M. Stanback

5

M. Formicivorus

CVI

HNHR

9 Aug 0730 - 1006. Saw 945, 1170, 1090, 1499, 1654, 1655, 1656. These all + ID, and repeated. I never saw 1089 and don't think he (or 1496, 97, & 98) is here. J 1499 is a (♀)! 1655 > 1656, 1654 >> 1655. J 1499 > 1656. (Hier is 1654 > 55 > 56 - can't test for transitivity yet, but...)

10 Sept 0700 - 0800 Census: + ID: 945, 1089, 1170, 1090, 1499, 1654, 1655, 1656.

6 Dec 1445 ♂ M

15 Dec Acorn Count: 1500 + 1600 + 1000 =

4100




1988 M. Stanback

M. Formicivorus

Mill

HNHR

- 30 Mar 1135 2 birds Flushed From S side of tree - I think from a new hole in an upright snag coming out of a big S pointing horiz limb. Hole faces W. 
- Dec 87 Acorn Count: 200
- 9 Apr 1200 Bird in downfacing hole <sup>at</sup> ~~near~~ fork in limb that points toward pond. I thought I heard pecking before the bird stuck its head out.
- 10 Apr 1045, 0900 No one in hole when I cruised by.
- 11 Apr 1500 Bird Flashed From hole (9 Apr hole)
- 20 Apr 1720 Bird in hole
- 21 Apr 1500 Cut open hole (rotten, wierd... a bitch), but can barely touch the 4 semi-freshish eggs.
- 26 Apr pm I flushed the adult out and listened - but heard no kids
- 29 Apr 1600 Hatched! 3 kids + 1 pipping. I get the hole so I can get my hand in. RL = 5.7 LL = 7.0 RW = 4.2
- 1 May 1615 Failed. It seems the inner door in this rotten hole collapsed on 29 apr. I retrieved 2 dead kids and a semi smashed pipping egg. Damn.
- 13 May 0900 Bird in 30 Mar hole
- 1300 Climb - bird in hole, but no eggs
- 15 May 1220 Bird in hole
- 17 May 1415 "
- 19 May 1500 Peeped - eggs ( $\geq 4$ ) Very rotten limb - paper thin - started sawing w knife, decided I need to return w glue & tape
- 20 May 0840 Finished door (no glue-tape used, but fragile) 5 opaque eggs.
- 23 May 1540 Still not hatched - and not good for photo (ladder?)
- 25 May 1430 RL = 5.7, LL = 5.0, + 3 eggs





1988

M. Stanback

2

M. FormicivorusMillHNHR

26 May 0815 RL = 7.3 LL = 5.95 RW = 4.9 LW = 5.15 egg pip?

27 May 0650 10.4 8.55 4.4 6.7 4.6

28 May 0615 14.3 11.7 3.9 9.5 4.05

30 May 0640 21(9.1) = (G), 16.9 = (Y), LW = 11.2

31 May 0635 24.5(10) 19.5(10.5) 14.8

2 Jun 0645 34.3(11.6) 26.1(12.2) 19.1(10.1)

3 Jun 0645 40.7(12.45) 30.5(12.8) 21.4(10.55)

5 Jun 0700 48.2(13.9) 34.2(14.1) 26.1(11.9)

7 Jun 0630 56(15) 2.9(3) 41.45(15.4) 24.8(13.05)

10 Jun 0745 ② 69.1(16.15) 9.8(5.5) 9.5/54(16.65) 44<sup>(25)</sup> ~~21.75~~ 29.5(14.4)

12 Jun 0740 28.1 15.1

Y 57.9 17.55 9.4 6.2 8

LG 72 43 16.85 17 18.3 11.2 16.9

14 Jun 0820 - 32 15.6 4.3 2.2

Y 66.4 41.5 18.25 17.25 ✓ 13.3 15

LG 79 56 17.6 21 29 14.2 23.5

16 Jun - 31 23 16.3 5.7 6.5 4.2 5.5

Y 68.1 52.5 19.3 20 27.1 13.7 23

G 78.3 67.5 18.1 24.4 40.6 16.2 31.4

17 Jun 0915 Big gopher snake tween Mill + CV2. Didn't remove.

2000 Runt is dead (30 g) 6.5<sup>PS</sup>(7.9)<sup>P</sup> Set ambush

18 Jun 0340 Damn. String broke (monofilament) (Set again pm)

19 Jun No one went in. Its very hot 2-nite. Will try again

19 Jun 0845<sup>G</sup> 79.5 84.5 19.15 24.5 56.1 20.5 41.5rain! Y 74.5 69.5 20.1 24.5 42.8 20.2 33.8<sup>K</sup> tail

20 Jun Set ambush last night - no one went in. Damn

6 July 0900-1000 Census: PID: 1261, 5270, 1599. Saw 1599 repeatedly only seems to be 1 juv present.

check  
for ②



1988

M. Stanback

3

M. Formicivorus

Mill

HNHR

6 Dec 1500 Saw ♀ 1261<sup>twice</sup>. Set ambush. Only one bird came to the tree (made a lot of noise) - didn't go in.

15 Dec Acorn Count: 400. Saw 5220



1988 M. Stanback

M. Formicivorus

CV2 Annex

H NHR

30 Mar 0930 Saw 3 birds, 2 were ♂♂ - 1 of these males seemed to have OL, others seemed NOBA (?)

Dec 87 Acorn Count: 11000

1 Apr 1600 Way to go Jane! She found the nest! Way out on the limb that points to the gran. Not convenient.

2 Apr 1015 Opened nest (thin) 3 fresh eggs

5 Apr? Sent Jane for incub watch (to det whether ♂♂ B or H), but, alas, no one showed up. Predated?

9 Apr 1100 Check hole - empty. Damn. Back to square 1.

11 Apr 1515 Found nest! W Facing hole up canyon.

12 Apr 1415 Cut open hole - 6 fresh eggs - not too warm. <sup>Bird in hole on arrival</sup>

21 Apr 1630 RL = 7.9 LL = 5.6 RW = 9.3 LW = 6.15 + 2 in-eggs

The babies all looked "new" (pink, not white - no ribs showing, fat)

→ I'll wager they all hatched this am (RW with jump on 'em)

22 Apr 1715 11.2 7.6 13.4 9.5

24 Apr 1630 ~~20.9(10.2)~~ RL = 19.5(9.7) = R / LL = 11.3 / RW = 20.9(10.2) = B / LW = 18.1(8.8)

Scrub jay nest nearby - cute! 2 eggs still in ↑ nest. + 2 eggs

26 Apr 1530 R = 27.6(11.4) Y = 24.8(11) B = 29.7(12.4) 21.8(10.3)

28 Apr 1615 39.6(13.35) 36.2(12.7) 40.5(14.55) 30.1(12.3) <sup>no</sup> eggs

30 Apr 1630 47(15) 44(14.5) 49.3(16.35) 37.3(14.2)

3 May 1800 63(17.2) 2.5 60.8(16.4) 3.8(2.2) 69.9(17.9) 6.3(3.6) 51.5(15.7)

9 May <sup>1500</sup> R 80.5 53 20.25 22.7 26.6 13.6 18

Y 83.5 53 19 17 25.1 14 18

LB 92.5 60 21.25 20.5 32.5 16.5 22

- 72 46 18.8 18.2 22.7 14.7

whats the 1<sup>st</sup>  
day wt = wing chr

wt = wing chr

1988 M. Stanback

2

M. FormicivorusCV2 AnnexHNHR

11 May <sup>1535</sup>  
 LB 102 73 21.9 23 44.5 18.5 30  
 R 87.3 66 20.95 26.6 38.3 18 25.5  
 Y 88 65 19.6 22 36 17.2 25.9

- 79.4 58.5 19.45 23 33.3 15.5 23

13 May <sup>1500</sup>  
 B 99.8 83.5 22.8 28.5 55.5 21 36  
 Y 87.8 76 19.7 24 48 19.5 33.5  
 - 76 70 20.2 25.5 44.6 19.5 30  
 R 84 76.5 21.25 26 49.7 18.5 32.5

There was a big gopher snake at the base of the tree beside the nest tree. He went into the hollow base & I couldn't reach him.

15 May <sup>1345</sup>  
 LB 99 95 23.85 30 66.6 24.5 43  
 R 84.7 89.5 21.6 26 60.5 23.5 39  
 Y 89 ~~88~~ 88 ~~21.2~~ 26 58.7 20 40.5  
 MB 81.4 81 20.95 26 56 21 36.5

17 May <sup>1530</sup>  
 NY 86.5 98 22.65 25 70 17.1 47.5 Y  
 94 105 24.5 24 77 20 50 B  
 KM 78.5 99 23.2 26.5 70.3 27.5 46 G  
 moY 76.5 97 <sup>92</sup> 22.55 25 66.5 22.5 43.5 P

2 Jun 1600 DB-Y(N) / Mauve juv = 1536. No one in holes

8 June 0740 Hello holes - nothing

10 Jun 0840 " " Jane saw bird in rotten horiz hole

11 Jun 0900 hello holes (incl horiz) - nope, but a juv at nest hol  
 ~~~~~ did sev times tween 11 + 17

17 Jun 1730 hello - nothing

19 Jun Jane reports 1372 & 1375 are back at CV2 with one NOBA ♀ and ≥ 2 NOBA juvs. 1373, his 99 and kids were not there (tho J 1538 was seen)





1988

M. Stanback

1

M. Formicivorus

CV2

HNHR

(19 Jun) I think there was a CV2 Annex and that's the one we followed. 1372 + 1373 were seen at the original CV2 nest (a 3 egg : 1 ♀).

21 Jun 1415 - 1530 Spied hoping to get a 2<sup>nd</sup> nest. Twice a bird flew to the "creek", I checked it out and found a so-so hole + watched it awhile. Mostly just dead here.

23 Jun 0815 Saw a banded juv RWDP by box 98, but he (actually, it had a ♀ forehead!) didn't match anyone! Ah ha, me thinks was Murf 1485 BP. w/KP(u). Also this would explain forehead

29 Jun 1000-1015 Spied on CV2. They were hanging out in the granary and I saw no forays in any direction

3 Jly 0920-0930 Watched CV2 - nada.

9 Jly Roosted in a hole in a rotten limb on the downhill side of the Holy Tree.

12 July 0630 checked out the hole - No good - it has no bottom. It fell off, so it's an open cylinder. ~~Rotten~~ Rotten.

7 Sept Roost watch. Went into 12 July hole. (Before this, at 1937 I heard an ACW get killed.)

16 Nov I plugged the bottom of the hole with screen

6 Dec Acorn count: From W: 3500 ~ 10,000

15 Dec " E: 3400

saw NOB ♂ (5319), NOB ♀ (5320), and ♂ LB.K/O maybe ROV

The latter bird doesn't fit in CV2 or CV2A, but it was sitting peacefully.



1988 M. Stanback

M. Formicivorus

DARK HOLLOW

H/NHR

30 Mar 0910 Hello'd holes - nothing.

1145 Bird in Fall 87 almost-nest hole.

Dec 87 Acorn Count: 2500

1 Apr 1500 Climbed & peeped - no eggs, but not a good peep.

2 Apr 0810 - 0836. Watched From W. Bird to 87 hole once.

There are 3 birds here. They sat on a branch together briefly. It looked like maybe mate guarding - some following, a little chasing. I saw a ♂ (NOID) + ♀ (MT = 1035?)

3 Apr 0830 - 0845 Watching From Far Knoll. Can't see any holes From here, but they did seem to visit the immediate vicinity of both holes (87 nest + 87 Fall suspect)

3 Apr 1550 Bird in 87 hole.

4 Apr 0830 Thought I saw a bird Flush From Fall 87 hole

9 Apr 1030 Checked 87 hole (no eggs, but good shape) and the hole below it (nothing, not as good, but OK). No one Flushed From these or the Fall 87 hole

10 Apr 0850 Hello'd holes - nothing. (ditto at 1050)

11 Apr 1425 - 1500 Spied on trees for  $\frac{1}{2}$  hr, no hints. Hello'd - nothing

20 Apr 1700 Hello'd holes - nothing.

22 Apr 1430 After spying awhile, a bird goes to the 87 hole. Soon after I arrive w gear and hello - nothing. As I start putting the rope up a bird sticks its head out - so that was the problem - they're deaf. 3 translucent but warm eggs - numbered 1-3.

25 Apr 1515 3 opaque, warm eggs. That's it. Morgan reports large gopher snake here

30 Apr 1545 Not hatched yet.

1 May 1715 RL = 7.9 LL = 8.05 RW = 6.8

|    |   |    |
|----|---|----|
| 21 | 0 | 5  |
| 22 | 1 | 9  |
| 23 | 2 | 12 |
| 24 | 3 | 16 |



4 1  
20 0

1988 M. Stanback

M. Formicivorus

OKCO

HNHR

- 30 Mar 1000 87 nest hole door fallen out. Watched 86 for 10 min. Nada
- Dec 87 Acorn Count: 3700
- 3 Apr 1615 Bird in 86 hole
- 4 Apr 0815 Climbed - empty, but good shape
- 9 Apr 1120 One bird left 86 hole - another went in.
- 10 Apr 0830 4 Fresh cool eggs (#1-4) Wnc
- 24 Apr 0730  $w(l) = 12.9$   $O(r) = 15.6$   $B(r) = 15.1$   $M_v(l) = 16.6$
- 13 May 0800  
W 80.9 78 18.75 25.4 51.5 19.1 32.4 (2) <sup>1531</sup> B  
O 79.5 84 19.55 28.5 57.5 22 37.2 <sup>1532</sup> P  
B 84.3 82.5 20.2 25.5 56.4 18 35.2 <sup>1533</sup> Y  
M 85.2 89 21.5 29.3 61.3 21 39.5 2.5 <sup>1534</sup> G
- 4 Jun hello holes - watch hole - nothing
- 8 Jun 0750 Watched nest hole for 10 min - nothing. Noticed birds flying in dir of 87 nest. (dead sycamore). Nest! In lower of high holes in main trunk (near broken top) ♂ in hole. Set string. Will return 1730 Opened hole - 5 opaque eggs.
- 10 Jun 0825  $RL = 5.55 = 4.55$ ,  $LL = 4.5$  + 3 eggs
- 11 Jun 0844  $RL = 7.2$ ,  $LL = 7.7$ ,  $RW = 5.4$ ,  $B = 4.05$ , + 1 egg <sup>Fresh</sup>
- 12 Jun 0835 10.7 10.9 8.55 5.6 egg pipping (I helped it by removing cap. Chick + shell (-cap) = 4.25 - .25 for shell = 4.0 hatch wt
- 13 Jun 0905 15.45 15.7 12.3 <sup>8.5</sup> 2.75 (pecked up) 1 removed
- 14 Jun 0735 19.45 (8.15) = DG, 19.2 (8.1) = O,  $RW = 16.4$ ,  $B = 11.7$
- 15 Jun 0845 25.1 (9), 24 (9.1),  $RW = R = 24.3$  (8.7), 15.1
- 17 Jun 0845 35.3 (11.05), 36.25 (11.1), 32.5 (11.1), 25.8 (10.2)
- 17 Jun 1800 39.8 = G, 42.5 = O, 37 = R, 28.5 = -, 26.3 = M, 26.4 = K  
At 1645  $M = 24.3$ ,  $K = 24.3$ . I then gave them dog food



Month : 9/12 653 2768

1988

M. Stanback

2

M. FormicivorusOKCOHNHR

19 Jun 0935 R=42.2(13.05), O=46.6(12.9), G=47.2(12.85)

- = 33.8(12.05), M=31.4(13.05), K=30.8(13.05)

21 June 0945 G 56.4 14.2 5.9 - 3 4.5

O 53.1 14.2 3.3

K 38 15.05

- 40.6 14.2

R 51.2 15.05 2.6 1.5 3

M 37.9 15.05

23 Jun 0900 O 65.8 15.45 10 4.8 7

R 62.4 16 7.5 5 7.3 (2)

M 46 16.5 5.1 2.8 4.1

- 52.5 15.5 5.1 4 4.6

OG 67 15.2 14 almost 7.3 11

K 44.5 16.4 5.3 2.8 4.2

26 Jun 0930 M 53.5 38.3 18.3 14.5 15.2 8 12.5

O 65.4 49 17.4 20.5 23.6 11.2 17.6

K 52.5 38.2 18.65 13.3 15.3 5.7 11.2

- 59.5 41 17.2 14.2 16 8.2 14.1

G 72.5 55.5 17.2 23 29.5 12.3 22.3

R 71.8 47 17.8 18 20.8 11.1 17.1 (2)

28 Jun 0915 M 61 49.8 19 20 25 10.5 19

R 77.9 57 18.7 19.6 30.5 13 23.5

O 68.5 58.5 17.95 22.4 33.5 12.3 23.5

G 73.6 67 17.85 24.5 40 16.6 29.4

K 55.8 49.8 19.2 18.8 24.5 7.5 17.2

- 65 51.8 17.9 17.8 25.5 ~~10.5~~ 11.3 20

a terrible day



1988

M. Stanback

3

M. FormicivorusOKCOHNHR

30 Jun

0940

K 63.6 60 20.0 22 34 9.5 23

- 70.2 63 18.35 21.5 36 14.3 27

R 79 69 19.35 25.5 41 17 29.6

O 76 70 18.55 23 43.7 15 29.8

M 63.2 61 19.8 22.5 34.5 15.5 24.5

G 79 75.5 18.7 24.1 50.6 18.8 35.4

2 Jul

0820

G 82 86.5 19.35 23.5 61.2 20 41.7

M 71 20.75 26.5 46 17.8 30.6

IR 78.1 78 20.05 29.5 50.8 19 36

O 76.3 79 19.4 22.6 54 17 35.5

K 66 70.5 20.85 24 44 15.3 29

- 72 74 18.9 22.7 46.1 16 32.9

4 July

0940

O 81 89 20.2 24.5 64 15 41.7 1636

(K) 71 80.5 21.65 24.5 54.2 12.5 34.5 1637

- R 79.5 87.5 21.3 21.8 61 17.5 42.3 1638

- G 73.5 96 20 26 70.8 20.7 49 1639

- 70 82.5 20.4 24.5 56.4 18 39.1 1640

(M) 75 83 21.75 25 56.3 16.7 36.5 1641

~~15 Dec 1988 M. Formicivorus~~

15 Dec Acorn Count: main gran 1300, other 700 = 2000

saw ♂ 1637, ♀ R/



1988

M. Stanback

1

M. FormicivorusW GateHNHR

30 Mar 0730 Heard pecking in central part of sycamore, but saw no birds (in a hole?) I helloed but got nobody.

Dec 87 Acorn Count: 1000

8 Apr 1030 Bird flushed from the high NW hole. Yuk

10 May 1000 Walt climbs high hole, finds 6 babies, 5 alive + one 39.8 (11.8) dead. This was the largest baby. It had no external injuries and appeared to have been healthy when it died. It seemed almost too fresh to blame on the hail storm.

21 Jun Jane reports ♀ in nest hole.

22 Jun 1 hello hole twice this afternoon - no one home.

28 Jun 1700 ♀ in hole. Wow.

|         |                         |      |    |      |    |
|---------|-------------------------|------|----|------|----|
| [26 May | <sup>1845</sup><br>1581 | 80.4 | 84 | 21.5 | 34 |
|         | 1582                    | 91.2 | 92 | 23   | 40 |
|         | 1583                    | 77.8 | 85 | 21.4 | 38 |
|         | - 1584                  | 81.2 | 87 | 21.1 | 37 |
|         | 1585                    | 81.7 | 71 | 19.6 | 28 |

28 July <sup>1010</sup>  
66.8 79 20.8 34 = 1662 =  $\frac{KPPK}{MP} = 48,47$

69.8 78 20.2 33 = 1663 =  $\frac{OB-M}{OB-O} = 45$

54.8 57 19.4 23 = 1664 =  $\frac{K-bW}{b-KW} = 42$

2 Aug Jane (or Ellie) found J1584 dead at W Gate (car?)

12 Aug 1584 is too dehydrated + bent up to get measurements except culmen = 25.65

20 Sept J1662 found mummified in Square Nail Flat. Not eaten.



$$\frac{n/w}{DB-Y/DB-Y(w)}$$

$$\frac{RW \quad m}{KLP \quad (MV)}$$

$$\frac{(LG \quad R \quad LG)}{m \quad DA}$$

$$\frac{MV \quad Y \quad 0}{DB-LB \quad m}$$

1988

M. Stanback

2

M. FormicivorusW GateHNHR

(20 Sept) Tail = 77.4, Bill = 23.9

3 Oct 0745 - 0900 Census: 1106, 1312, 5258, 1571, 1664

(1664 has a ratty, dark crown - there were a couple of black feathers in the front, but it's too soon to guess.)

12 Dec Acorn Count: I counted @ 1100, but I'll estimate 1900  
(I believe I underestimated last year)Census 1445 - 1515: 1106, 1312, 1571, 1582, 1583,  
F 1663, F 1664



7

11

11

1988

M. Stanback

1

M. FormicivorusGATEHNHR

30 Mar 0715 Moved the string from one of the syc holes.

31 Mar 0855 Saw ♂ <sup>ML</sup>~~Y.LB/Y~~. Pretty sure it was 1454.

Dec 87 Acorn Count : 200

11 Apr Haven't seen anyone in the hole since Walt cut the door

13 Apr Driving by I see bird in old hole right below new cut one

20 Apr Walt reports 2 eggs in high hole. Final clutch = 4

9 May 0640 K = 19.4(10) LP = 16.6(10) 13.2

got data

10 Sept 0830 - 0940 Census : 1453, 1454, 1578 (M?), 1580 (M)

The big <sup>va</sup> oak at the gate has lots of acorns. I think I saw 1579 → I saw MK (but I thought it was nk)3 Oct 0740. 45 Quick census: 1453, 1454, M 1578, E 1579.12 Dec Acorn Count : 300 Saw ♂ 1580, 1578, 1579



1989 M. Stanback

M. Formicivorus

PIPE

HNHR

28 Mar 1430 2 birds here. They've added lotsa acorns @ 1000

Dec 87 Acorn Count: (13 Dec 300) [

7 Apr 1430 On a whim I climb the 86 hole - <sup>old</sup> mouse nest.

11 Apr 1340 Looked for nest - no luck

14 Apr Walt reports 5 fresh eggs in new low hole

24 Apr 0845 RL = 4.2, another egg pipping, another infert, 2 still unhatched

25 Apr 0845 RL gone, 2 <sup>near death</sup> very cold babies - one looks new and an unhatched Fertile egg. One marked RL = 4.65g, B = 3.85g. Both added to nest at Wolf. Egg added to Wolf also.

1 May 1030 Bird in hole

4 May 1500 " Climb. 1 Fresh egg. #1

9 May 1800 5 eggs

19 May 1210 RL = 9.3 LL = 8.6 RW = 9.3 LW = 4.8 B = 3.5 <sup>hatched early (18 May)</sup>

20 May 1210 RL = 11.95 LL = 11.3 RW = 12.1 LW = 7.0 = 3.1

21 May 1230 RL = W = 15.8, LL = M = 16.1, RW = LG = 15.7, LW = 10.2

Runt is gone. even in ideal circumstances (hot weather and a ladybug boom) a monog pair cannot raise > 4 kids

22 May 1150 W = 18.8 (10), G = 20 (10.05), M = 19.6 (9.6), r = 13.5

23 May 1150 W = 23 (11.05), LG = 22.8 (10.9), M = 24.2 (10.8) r = 14.5

25 May 1345 29.6 (13.1) 30.6 (12.95) 31.45 (12.55) 20.1 (10.7)

26 May 1320 32.9 (13.85), 34.4 (13.65), 35.4 (13.5), 21.8 (11.35)

28 May 1200 42 (15.4) 41.7 (15.5) 44.2 (15.1), 27.6 (12.65) ← 26.6

30 May 1115 W 47.4 ( 16.5 6.1 5.7

LG 48 16.6 4.7 2.7 5.1

M 49.8 16.2 4.1 3.5

- 30.05 13.85



1988

M. Stanback

2

M. FormicivorusPIPEHNR

1 Jun

1035

LG 60

17.85

9.6

6.5

9.6

W 61

17.5

11.5

11

M 62.2

17.5

9.3

6.5

9

- 40

15.05

3.1

3

4.1

3 Jun

1150

G 66.5

44

18.95

17.5

18

9

17

M 70

43

18.7

17.2

18

9

16

W 67.5

45

18.9

15.5

20

12

18

- 47

16.45

6.2

7

8.2

5 Jun

1215

M 72.9

54

19.9

23

28.1

13

22

W 68.9

56

19.5

21.5

30.2

~~30.2~~

14.5

24

G 66

54

19.9

19.1

28

13.6

22.5

- 50

35

17.45

12.5

11

13

7 Jun

1100

W 69.9

67

20.15

25

40

16

30

- 54.4

44.5

18.2

16.1

20.2

9

18

G 68.9

63.5

20.55

23.5

37.6

16

28.4

M 74

65

20.6

24.5

38

17

27.5

9 Jun

1015

- 57.5

54

18.75

21

29

12

24

W 69

76

21.2

25

50

17.5

35.5

M 78

74

21.2

25

47.9

16

33.6

G 71.7

72

21

23.5

47.5

17

34

11 Jun

0855

- 66.3

66

19.4

~~22.05~~

22.5

39.2

16.5

29

11

M 81

84

21.7

25

57.7

20.5

39.5

13

G 72.7

83

21.8

24

57.4

15

40

12

W 73.8

87

21.7

25.7

60

21

41.5

14

13 Jun

1400

MYO 66.6

77

20.0

22

50.9

16.7

34.5

B

MW 71.3

96

22.3

22

70

15

47.4

Y

- 78.7

94.5

22.9

23

68.8

25

45.6

P

GRG 71

92

22.65

23

67.4

16

46

G



1988 M. Stanback

3

M. Formicivorus

PIPE

HNHR

8 Sept 0835-0905 Set up blind but no birds came.  
They still have a few acorns left. Abandon?  
0910 As I'm leaving 2 birds arrive, see me + leave.

11 Dec Acorn Count : 1300





1988

M. Stanback

M. FormicivorusWarp 5HNHR

|        |        |                                                              |                              |                                |                      |                                                                  |            |      |
|--------|--------|--------------------------------------------------------------|------------------------------|--------------------------------|----------------------|------------------------------------------------------------------|------------|------|
| 11 May | 1030   | 7 opaque eggs in the cut out webbing hole in the black oak.  |                              |                                |                      |                                                                  |            |      |
| 15 May | 1015   | RL = 6.5                                                     | LL = 5.35                    | RW = 5.1                       | LW = 7.2             | B = 12                                                           |            |      |
|        |        | 1 egg pipping, 1 <del>unhatched</del> unhatched but Fertile. |                              |                                |                      |                                                                  |            |      |
| 16 May | 1345   | RL = 9.5                                                     | LL = 7.1                     | RW = 6.0                       | LW = 11              | B = 17.5                                                         | pip = 2.55 |      |
|        |        | (removed). Last egg hatching - I helped it a bit.            |                              |                                |                      |                                                                  |            |      |
|        | 1745   | (in lab) 2.3 g & still alive, Died 1800                      |                              |                                |                      |                                                                  |            |      |
| 18 May | 1040   | B = 23.6                                                     | RL = 14.35                   | LL = 12.3                      | LW = 14              | and has wierd spike sticking out of head <sup>top</sup> (tongue) |            |      |
| 20 May | 0625   | RL = LB = 20.5 (10.05)                                       | LL = 18.25                   | LW = P = 22 (10.45)            | Back = R = 30.8 (12) |                                                                  |            |      |
| 22 May | 0640   | $\bar{P} = 32.6 (12.65)$                                     | $\underline{LB} = 32 (11.8)$ | $\underline{R} = 43.9 (13.85)$ | $26.9 (10.9)$        |                                                                  |            |      |
| 26 May | 0715   | 47.6 (15.8)                                                  | 46.4 (14.45)                 | 58 (16.1)                      | 6.2 (3.3)            | 44 (14.25)                                                       |            |      |
| 28 May | 1115   | P 58.5                                                       | 17.05                        | 5.9                            | 4.5                  |                                                                  |            |      |
|        |        | - 59.3                                                       | 15.75                        | 2.3                            | 1.5                  |                                                                  |            |      |
|        |        | R 72.1                                                       | 17.3                         | 13.75                          | 13.8                 | 8                                                                | 10         |      |
|        |        | B 58.5                                                       | 15.55                        | 6.1                            | 2.5                  |                                                                  |            |      |
| 30 May | 1040   | R 74                                                         | 50                           | 17.85                          | 19.8                 | 22.5                                                             | 10.5       | 16   |
|        |        | LB 60.5                                                      | 16.45                        | 12.2                           | 6                    | 7.7                                                              |            |      |
|        |        | P 60.4                                                       | 34                           | 18.15                          | 10.5                 | 11                                                               | 8          |      |
|        |        | - 64.5                                                       | 16.8                         | 6.4                            | 4                    |                                                                  |            |      |
| 1 Jun  | B 0945 | 73.5                                                         | 44.5                         | 17.45                          | 17.2                 | 20.1                                                             | 8.5        | 13.5 |
|        |        | - 76.2                                                       | 36.5                         | 17.75                          | 12                   | 7.9                                                              | 9.5        |      |
|        | P      | 68.2                                                         | 41.5                         | 18.95                          | 14.7                 | 17.9                                                             | 10         | 13.5 |
|        | R      | 87.1                                                         | 61                           | 18.65                          | 23                   | 32.5                                                             | 14         | 23   |

|     |    | ✓<br>LW | ✓<br>LL | ✓<br>RW | ✓<br>RL<br>BL | ✓<br>Pip0<br>RL | Pink<br>LL | ✓<br>RW | ✓<br>Pip0<br>LW | ✓<br>Pip0<br>R |
|-----|----|---------|---------|---------|---------------|-----------------|------------|---------|-----------------|----------------|
| 3   | 24 | 5.1     | 6.3     | 6.5     |               |                 |            |         |                 |                |
| 14  | 25 | 6.0     | 7.44    | 7.38    | 5.0           | 4.65            |            |         |                 | 3.85           |
| 5/4 | 26 | 12.1    | 11.8    | 11      | 8.55          | 7.6             | 4.8        | 4.9     | 3.6             | 6.3            |

1988

M. Stanback

2

M. FormicivorusWrp 5HNHR

5 Jun

1030

R 79.2 81 20.5 28.5 54.2 25 35.5

B 73.8 66.5 19.2 23 41.5 15 26

P 73 62 20.25 21.5 36.9 14 26

- 77.8 55.5 19.45 21.8 29 11.5 21.8

7 Jun

1010

BN 73.1 77 19.9 26.5 51.8 16 32

BKR 80 90 20.6 24 63.4 24.3 41.5

MKW 74.2 71.5 20.5 23 46.7 16.2 31.5

80 63 20.1 27 37.5 14.7 26.6

9 Jun

0925

BKR 78.9 99 21.3 ~~22~~ 23 ~~22.5~~ 72.5 19.5 47.7

MKW 73 80 21.7 20 56 19 38

BN 78.5 87 20.25 24 62 21 38


MM 77.8 72 20.7 20 46 19 32.5

1 July

0430

BKR 71 137 24.0 = J 1591 Tail → 81.5

The only tail spotting was 2 very tiny spots on the outer retrices.



29 Sept

0710 - 0800 Waited in pre set blind - nothing.

Dec

No Acorns!

\*

\* Group Update \* The whole group started to Tizzle out ever since banding. No one ever showed up for

censuses. LSO: 5308 - 880325, 1467 - 880325, 1468 - 880603, 1591 - 880919, 1592 - 880605, 1593 - 880605, 1594 - 880929. All disap 881031 ± 2 M

11

12

13

14

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16

17

18

19

20

1988 M. Stanback

1

M. Formicivorus

Wolf

HNHR

Dec 87 Acorn Count: 285

11 Apr 1315 Spied on 87 hole awhile - nothing.

14 Apr 1300 Cut open hole in syc snag - 6 fresh eggs.

24 Apr 1445 RL = 5.1 LL = 6.3 RW = 6.5

25 Apr 0745 RL (now LW) = 6.0, LL = 7.44, RW = 7.38

RL = 5.0 g, also 2 pipping eggs. Ooops, now there's 2 RLs in here, one from Pipe (4.65 g) and one from Wolf (5.0). This is because I moved 2 dying Pipe babies into Wolf. I also added an unhatched egg from Pipe <sup>at 0845</sup>. There are now 6 babies and 3 eggs in the nest. The other Pipe baby B = 3.85

26 Apr 1000 big RL = BL = 8.05, RL = 7.6, LL = 11.8, LL = 4.8

RW = 11.0, RW = 4.9, LW = 10.1, LW = 3.6, B = 6.3

27 Apr 1030 BL = 12.3, RL = 11.3, LL = 16.3, LL = 6.4, RW = 15.6, RW = 5.95, LW = 14.4, LW = 3.7, B = 9.9

28 Apr 1020 BL = 15.8, RL = 14.7, LL = 20.4 (9.7), LL = 9.4, RW = 18.45, RW = 8.9, LW = 19.2 (9.45), LW = 3.65, B = 13.2 (9.3)

29 Apr 1100 BL = 19.5 (9.5) = B, RL = Y = 19.7 (10), LL = G = 24.4 (11), LL = 13.2, RW = R = 24.1 (10.4), RW = 11.8, LW = K = 22.8 (10.5), B = W = 17.6 (9.4)

30 Apr 1030 K = 26.3 (11.55), W = 20.3 (10.3), B = 23 (10.35), G = 28.3 (12.25), Y = 22.8 (10.7), R = 26.7 (11.3), RW = 12.9, LL = 16.2

1 May 1045 W = 22 (11.15), K = 30 (12.4), R = 29.5 (12.15), Y = 25.2 (11.5), B = 26.5 (11.3), G = 30.9 (13.25), = 18.5 (10), = 13.6

2 May 1130 Y = 29 (12.4), K = 34.5 (12.9), B = 29.4 (12.3), G = 36.6 (14.5), W = 27 (12.25), R = 33.5 (13.1), P = 20.5 (10.7), 17 (10.15)

3 May 1045 G = 41.3 (14.95), B = 31.4 (13), W = 31.2 (13.2), K = 35.6 (13.9), P = 22.9 (11.4), R = 38 (13.8), Y = 32 (13.2), 20.4 (10.8)



1988 M. Stanback

2

M. formicivorusWolfHNHR

6 May

~~Wolf was very aggressive towards the other birds, particularly the HNHs~~  
 1145  
 $W = 36.6(15.65)$ ,  $P = 27.3(13.95)$ ,  $B = 41.4(15.2)4$ ,  $R = 45.2(15.55)3.85(2.3)$   
 $Y = 40.4(15.7)$ ,  $G = 49(12.1)$ ,  $K = 48.1(16.1)5.5(4.1)$ ,  $r = 21.7(13.1)$

8 May

1240  
 $W = 46.5(16.9)3.9(3.9)$ ,  $G = 61.9(18.1)7.4(5)6(2)$ ,  $B = 53.3(16.3)8.1(6.05)$   
 $r = 21.4(14.1)$ ,  $Y = 50.5(16.8)4.9(3.2)$ ,  $P = 27.8(15.2)2.7$  bruised  
 $K + R = \text{dead}$ ,  $R$  gone from nest

$K$  (ex post facto) =  $49.4(16.45)11(4.5)6.8$  Head injury - peck on  
 back of right side<sup>of head</sup>; many pecks on back; right wing pecked;  
 bruises on chest; right leg bruised + pecked. Will be preserved.

Outer hind toe on L Foot broken.

9 May

2000  $B = 60(16.7)11(8.2)$ ,  $Y^{(2)} = 54(17.2)7(5)6$ ,  $P = 31.4(15.35)4(2.5)$   
 $G = 66.6(18.85)10^{(2)}$  <sup>shit</sup>  $10.5$   $7(10)^{(2)}$ ,  $W = 51.3(17.4)5.3(5.5)7$

10 May

<sup>B</sup>  
 1115 63.8 37 17.35 13.2 13.9 7.2 10.9  
 $W$  56.1 17.9 7.4 7 9  
 $Y$  59.8 17.7 10 6.5 9 (2)  
 $G$  70 40 (19.1) 13 14.5 6.3 12.5 (2)  
 $P$  37.4 15.75 6.05 3.08

big clouds of ladybugs today

11 May

1115 <sup>Y</sup> 62.2 39 18.3 13 14.2 7.8 12 (2)  
 $B$  66.5 42.5 17.7 16.5 19 9 14.5  
 $W$  61.9 18.2 10.9 10 12  
 $G$  71.7 46 (19.6) <sup>maybe</sup> 19.2 17.4 19.7 8.8 15.5 (2)  
 $r$  37.5 16.1 9.45 6

12 May

1110  
 $W$  62.2 38 18.85 12.8 15 11.8 15  
 $B$  67.9 49 18.25 19.8 24 10.5 17.3  
 $G$  69.7 52 20.2 19 25.2 11.5 18  
 $Y$  61.5 45 18.95 16.5 19.2 9.5 15  
 $r$  39.5 16.8





1988

M. Stanback

3

M. FormicivorusWolfHNHR

14 May

<sup>1030</sup>

Y 67.9 57 19.8 22.5 29.5 11 22

W 70.5 48.5 20 19 24.5 12 21

P 42 37 17.8 12.9 17.8 7.5 12

G 73.9 <sup>62</sup>~~24.7~~ 21.7 24.5 35.5 15 24.5B 77 60 19.35<sup>(1)</sup> 23.5 34.3 13 23.5

16 May

<sup>1500</sup>W 79.5 61 21 24 36.5 14.5 28P 52.7 48 18.45 18 26.5 11.5 18.7LG 78.5 74.5 22.4 24 47 16 31.6LB 82.9 72 20.25 27.5 46.3 15.3 30.3Y 73.4 69.5 21.05 24 41.5 14.2 29

18 May

<sup>1125</sup>

Y 70.3 79.5 21.85 25 51.5 15 34

P 55.2 56 19.2 21.6 33.5 12.5 23

W 80.5 71.5 21.7 26 46 16.5 32.8

B 82.2 82 21.2 25 56 18.5 36.5

G 79.4 84 23.2 25 57 20 37.5

Y

20 May

<sup>1300</sup>

3M 76 89.5 22.4 27.5 62 18.5 41 orange neck Y

W

NW 87 83 22.4 27 56.4 20 39.5 G

G

Yon 81.7 92.5 23.8 24 67 19 44.4 B

r 64.5 68 19.9 25 43 16 29

B

PKB 88.5 92 21.7 28 67 18 42 P

22 Jun Jane reports adult ♂ & ♀ in <sup>hi</sup> hole. Nest? Ug.

29 Jun 0855-0920 Watch hi hole - no action. At one point there was an alarm call and 2 birds (juvs I think) rushed to another hole in that tree. As I left I bellied the nest and an adult stuck its head out.

14 July

Roost watch at nest - nada



1988

M. Stanback

4

M. FormicivorusWolfH/NHR

8 Sept 0800-0830 Censuses: 1123, 579, 1336

14 Sept 0500 Yipee, the kobber ambush worked: caught ♀ 1333, ♂ 1336,

\* \* ♂ ~~579~~ 579 rebanded (see cap record), ♀ 5293 banded as ♀ 1672. Stupid computer won't put her on the list.29 Sept 0700 Walking by 1 get ♂ RW = , ♀ RM = , ♂ BM = , ♂ =M = . Damn.

0810-0920 Censuses: ♂ 1123, ♂ 579, ♂ 1336, ♀ 1333, ♀ 1672,

J 1548 is ♂, J 1550 is ♂. All birds seen repeatedly.

No other Juvs seen. Good place to census is uphill

From the big oak on the W side of the road.

$$579 = \frac{M \cdot M}{L \cdot W / L \cdot G}$$

$$1672 = \frac{DB - W(N)}{M} / \frac{DB}{R - LG}$$

11 Dec Acorn Count: syc : 100

saw 579 ♂

oak : 350 ~

500



1988

M. Stanback

1

M. FormicivorusRIHNHR

30 Mar 1345 Saw ♀ 804 ( $\frac{MK}{LB \cdot Y / DB \cdot Y}$ ) Field list has her as DB-Y/DB-LP. No, she's LB-Y/. There's a nice new hole in the big oak, 2 down from the 1.

Dec 87 Acorn Count: 1570

7 Apr 1345 Several birds in the Bongo tree - mate guarding?

11 Apr 1330 Searched for nest - Found nothing.

23 Apr 1630 5 Fresh eggs in high hole (new) in road syc.

10 May 1130 Birds at Finch - who are they?

25 May 1800 1573 77.5 82 22.3 28.5 58 18.5 38.5

1574 89.5 88 20.6 23 61 18.5 38.5

1575 76 80 21.6 25 54.5 18 34 (2)

1576 64 70 19.55 29 45.3 14 28.5

1577 70 66 20.3 25 42 14.5 26

21 Jun 1630-1650 Census: 1574 (✓) + 1576 (KDE)

10 July 2000 Ambush J 1573 wt: 76.5, ch: 138, T: 79, c: 27.6

9 Sept 0705-0740 Census: J M = 1575, LPKLB = 1573,

LB BYC = 1574, (all ♂), NOBA ♂ = 5295,

DEQ = ?<sup>1577</sup>, ♀ LKL = 804 ??, ♀ MLP = 1464

6 Nov Ambush: caught J♀ 1576: 70.1 (138) 28.2 (77)

Herit: 59, 58.5, 60, 59, 58, 56, 61

11 Dec Acorn Count: uphill oak: 250

saw 1573

syc snag: 850

1100



1988 M. Stanback

1

M. FormicivorusMacFlatHNHR

Dec 87 Acorn Count: 780

7 Apr 1350 After sev days of cruising holes here unsuccessfully, I see a bird in the low, stupid, new hole in the sycamore that leans over the road on the E side of road. 2 birds flush out. 1500 Check it. Empty, but good shape.

10 Apr 1430 2 Fresh eggs in the stupid hole. 1 cut door, #1-2

11 Apr 1300 Marked egg #3 (is there only 1 ♀ here?)

12 Apr 1730 Marked egg #4. They are warm. Bird in hole.

20 Apr 1800 (1) 26.05 × 19.3, (2) 25.95 × 18.8 (3) 27.1 × 18.85

(4) 27.4 × 18.85, (5) 26.55 × 19.0

24 Apr 1200 Hatched early 12.0 11.0 5.65 9.3

25 Apr 1330 RL = 15.2 LL = 15.3 RW = 9.3 LW = 12.4 r = 3.9 <sup>from</sup> egg 526 Apr 1100 <sup>R</sup>18.8(8.95) / <sup>L</sup>18(9.0) / RW = 11.5 LW = 15.7 r = 3.55

27 Apr 1115 24(9.75), 22.7(10.1), LW = 21.3(10) RW = 15.3

28 Apr 1100 29.4(10.5), 26.6(11.1) 25.5(11.1) 19(9)

29 Apr 1140 35(11.8) 31(11.9) 30(12.2) 23.8(9.75)

30 Apr 1100 37.7(12.5) 34.4(12.95) 35.6(13.25) 24.8(10.45)

1 May 1120 41.2(13.3) 38.6(13.6) 37.9(14.25) 29.5(11.2)

3 May 1115 <sup>50</sup>47.7(15.05) 4.4 48(14.9) 4.3 49(16.2) 37.4(12.07) <sup>05?</sup>6 May <sup>R</sup>1215 65.5 17.1 13.3 14.5 6 10

G 61.9 16.6 14.7 14.8 7 11.8

L 61 18.4 9.2 5.2 9.5

S 49 15.2 4.7 1.8

8 May <sup>1320</sup>R 71.1 50 18.15 19.7 24 12 16

S 58.1 35 16.4 12.6 6 7.2

L 68.7 41 19.6 16.3 17.3 10.5 16.1

G 67.8 49 18 22.4 25.2 13.2 19.2





1988 M. Stanback

2

M. FormicivorusMac FlatHNHR

18

10 May

1200

R 83.3 61 18.85 20.5 33.7 12 22.6

G 80.9 62.5 18.6 25.5 35.5 17 25.8

S 72.7 46 17.2 18.3 20.8 7 13.5

L 87.5 53 20.35 19 26.3 12.5 22.2

12 May

1210

LG 80.8 75 19.5 30 47.5 17.8 33

R 85 73 19.7 23.5 45.5 14 30

76.8 S <sup>maybe 76?</sup> 86.8(?) 59 18.25 23 31.7 12 20.5L <sup>MS</sup> 80.8(?) 65 21 24.8 37.5 15.5 28.5

14 May

1300

S 76.4 70 19.4 29.3 43 14.5 27.5

R 84 85 21.05 26 56.5 13.5 36

L 79.5 77 22.3 24 48.9 14 34.2

G 78.9 86 21 32 59 17.5 39.4

16 May

1300

R 88 93.5 22.05 24.3 67 18.5 43.2

OKV 82.1 80 20.5 30 53.3 18.5 34

L GWM 84.6 89 23.1 26.5 60 17.7 41

G APG 80.8 97 21.7 28.3 70.5 18 45.5

18 May

1235

R 82.8 103 22.3 24 77 16 49 P

G <sup>now DBM</sup> OM 81 107 22.6 28 80.2 15.5 52.5 B

GWM 83 98 23.45 27 70 14 47.5 Y

MDG 76 89 21.15 31 63.8 18 40 G

21 Jun 1610 - 1630 Census: some clues, but no positive IDs

8 Sept 1000 Surprised 4 birds in the string tree: 1455,  
1545 (♂) and 1546 (♀)

29 Sept 1000 - 1100: Census: 1073, 1455, 1545, 1546

11 Dec Acorn Count: burn 380

gold string 300, syc pol 400

~ 1430

stump 50, branchy syc 300



1988 M. Stanback

M. Formicivorus

R3

HNHR

28 Mar 1450 Saw ♂ 1011 (GP(N)/LP). There's a new S Facing hole in the big oak by the road.

30 Mar 1430 Bird in 87 hole. Flushed.

Dec 87 Acorn Count: 999

4 Apr 0940 Saw O/LG-O or O-LG/O. Who is this?

5 Apr We come with the big ladder to check 87 hole, but there's a bird in another hole!

7 Apr 1400 Well, Damn. On arrival there's a bird at the "other" hole from 5 Apr, but there's a bird with its head out of the 87 hole (Ladder at Buck) 1500 Driving by, I see bird in 87 hole.

12 Apr 1330 87 hole: 3 eggs - somewhat fresh, but not too.

25 Apr 1315 Bird in hole

5 May <sup>1630</sup>  
1511 84.5 51 19.5 18.9 24.7 10.2 16.5 P  
1510 80 50 19.7 20 23.5 11 17.5 Y  
1509 80.7 46 19.95 17.5 19 13.2 16 B

17 Jun Jane reports Feeding

2 July <sup>1300</sup>  
1633 67.9 66.5 21 20 40 15 32.8

1634 68.4 68 21.2 24 42.8 15.5 32.3 (2)

1635 65.9 65 20.15 22.6 37.2 17.5 27.5 (2)

8 Sept 1005-1030 Semi-spied: Saw ♂ 1011, ♀ 1205 GM. A NOBA ♂ sat in the live tree eating an acorn while ♀ 1205 sat in the granary. He fled when 1011 arrived. When I arrived 1011 was chasing another bird around the granary. Was it this NOBA?

29 Sept 0945 Saw 1011 (no rw), 1510 (DM), 1511 (GW), 1633 KO wm →

11 Dec: Acorn Count: syc ~ 1000 } 1450  
oak ~ 450 }

1988

M. Stanback

1

M. FormicivorusSH/LHNHR

Dec 87 Acorn Count: 2800

4 Apr 1630 Climbed 87 nest tree. Low old hole in nice shape, the hole above it is also very nice (both w fresh chips). The 87 nest hole is broken through to the top back of the higher hole on the W side.

13 July 1200 Saw (KW ♀) 260, ♂  $\frac{M}{DE/Y.O}$ , ♂  $\frac{LB-Y}{LB-Y}$  down at the Pump (For H<sub>2</sub>O) Are the ♂'s also SH/L?

13 Aug 0830: +10 on ♀ 260 at Pan trap at pump.

11 Sept Saw 1338 & 1426 at Pump pan

1 Nov 1300: Saw at KNOZ: 1385, 1426, and they seemed to be in the company of a NOBA ♀ and a NOBA juv!

13 Dec Acorn Count: not impressive - only the main gran had substantial acorns; about 1200, log beneath it = 165, other gran trees  $\approx$  100

1500



1988 M. Stanback

M. Formicivorus

ECF (Ecole Coline Faux)

HNHR

30 Nov Ambush. Caught NOBA ♀ (now 1677). 3 birds tried to go in hole last night, but she prevented other two from going in. Unknown to me, one of them roosted in an old knot in the same tree. It Flushed just before I came out of the tree. This tree is just inside the woods at the SE corner (top of hill) of SHIL Field. These birds appear to own the top of SHIL Field (all across)





1989

M. Stanback

1

M. FormicivorusSHWHVHR

Dec 87 Acorn Count:

11 Apr Walt climbs 87 hole &amp; reports 2 (Fresh?) eggs.

24 Aug Walt bands a single baby here 46.2 g, chord = 28, tail 13 mm.

25 Aug Jane does a watch, but no one Feeds. Abandon?

12 Dec 1015-1020 At Knd-Y pan trap, I see ♀ 1389 (<sup>MRWN</sup><sub>KPPK</sub>) and ♀ 1374 (<sup>OLG</sup><sub>M?</sub>). I also saw another bird with them that seemed to be ♀ MRWN (who is it?).Immediately after these birds left, a NOBA ♂ & ♀ came to the pan to drink13 Dec Acorn Count: 490 (I watched for 15 min beforehand, but no one came)



1988

M. Stanback

1

M. Formicivorus

ArF 2

HNHR

4 Apr 1515 Bird in 87 hole (lower tagged hole, door w/o bark)

6 Apr 1000 Bird in hole above ↑ (no door) Peeped - 4 eggs - couldn't tell how fresh. Check tomorrow

6 May 1300 1514 = 71.5 (56) / 1513 = 76.3 (58) / 1512 = 73.6 (60)

14 Jun 1430 Hello holes - nothing. Checked granary - some, but not a lot of acorns remain.

Idiot

1988

M. Stanback

M. Formicivorus

BKOK

HNHR

29 Mar 0740 Saw ♀ G-W(N)M (1212?)

Dec 87 Acorn Count: 4300

1 Apr 1030 Cut open new hole (back side 87 tree) 4 eggs (fresh?)

6 Apr 0700: (1) 25.5 x 17.6, (2) 25.25 x 17.6, (3) 25.9 x 17.2, (4) 25.7 x 18

0920 Why is BKOK drumming? Doops - just a Flicker.

11 Apr 0715 Damn - I knew they would hatch yesterday, but what could I do? RL = 7.75 LL = 8.3 RW = 8.1 LW = 5.15

12 Apr 0640 12.0 12.5 <sup>RW</sup> 12.8 = BG 8.55

15 Apr 0720 21.7 (10.3) 23.5 (11) 22.4 (10.4) 17 I think

17 Apr 0715 26.1 (12.2) 29.5 (12.5) 28.3 (12.1) 19 (10.3)

19 Apr 0700 34.9 (13.6) 38.2 (14.35) 36.8 (13.7) 26.9 (11.7)

21 Apr 0850 43.2 (14.95) 47.5 (15.8) 46.8 (14.8) 35.9 (13.1)

23 Apr 0900 53 (16) 6.5 (3.2) 56.5 (16.85) 5.35 (4) 55.6 (16) 8.2 (4.6) 42.5 (14.7)

28 Apr 0845 <sup>wt</sup> Chor Bill 1° 1° TS T

gB 70.5 59 18.85 22.5 29.2 10.6 20.5

RW 75.9 54 19.6 21 26.7 11.5 20.2

MG 68.8 58 18.5 19 26.7 12.2 19

- 58.8 34 17.1 11.1 10 11.6

30 Apr 0730 MG 70 65 19.4 22 37.5 15.5 25

gB 72.9 69 19.6 26 40.6 16.2 27.4

- 63.8 18.2 16 19 14.6 17.6 ← 43. chord

RW 77 65 20.65 23.5 38 15.7 26.5

2 May 1030 - 69.4 53 18.9 19.4 28.2 16 23

ME 75 75 20.3 26 49.4 17.7 32.1

RW 79 77 21.7 23.5 49.8 16.2 33.3

BG 78 78 20.6 25 52.1 17 33.8

$$8 - 1 = 7 - 1 \text{ inf} = 6$$

$$2 \text{ hatch} \quad + 4 e$$

$$5.2, 3$$

1988 M. Stanback

2

M. FormicivorusBKOKHVHR

|                        |                                                              |                                                                                             |      |       |      |      |      |     |      |             |
|------------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------|------|-------|------|------|------|-----|------|-------------|
| 5 May<br>snowing here! | RG                                                           | 0645                                                                                        | 74   | 93    | 21.5 | 27   | 67   | 19  | 43   | pink 1495   |
|                        | MRW                                                          |                                                                                             | 78.5 | 94    | 23.4 | 23.4 | 65   | 17  | 42   | green 1494  |
|                        | PKM                                                          |                                                                                             | 71.7 | 89    | 21.3 | 27   | 63.5 | 22  | 41.3 | blue 1493   |
|                        | -                                                            |                                                                                             | 70.5 | 68    | 20   | 24   | 42.2 | 22  | 31.5 | yellow 1492 |
| 27 May                 | 1300                                                         | Nest! In 87 hole. 3 Fresh eggs (#3 today [? clean])                                         |      |       |      |      |      |     |      |             |
| 1 Jun                  | 1530                                                         | 4 eggs                                                                                      |      |       |      |      |      |     |      |             |
| 8 Jun                  | 1200                                                         | None hatched yet! Pulled out 2 eggs (#2 piping, #4 not) I think juvs slow down the process. |      |       |      |      |      |     |      |             |
| 9 Jun                  | 1220                                                         | RL = 4.4, LL = 4.25, RW = 4.6, B = 3.1                                                      |      |       |      |      |      |     |      |             |
| 10 Jun                 | 1200                                                         |                                                                                             | 7.45 | 6.95  |      |      | 7.35 |     | 4.55 |             |
| 11 Jun                 | 1250                                                         |                                                                                             | 11.7 | 11.1  |      |      | 11.2 |     | 7.5  |             |
| 12 Jun                 | 1220                                                         |                                                                                             | 15.5 | 15    |      |      | 14.7 |     | 10.2 |             |
| 13 Jun                 | 1255                                                         | $\bar{K} = 21.2 (8.81)$ , $\bar{L}B = 19.8 (8.42)$ , $\bar{L}G = 19.6 (9.35)$ , 15.5        |      |       |      |      |      |     |      |             |
| 14 Jun                 | 1250                                                         | 26.1 (10), 26.6 (9.8), 25.4 (10.45), 19.7 (8.65)                                            |      |       |      |      |      |     |      |             |
| 15 Jun                 | 1250                                                         | 32.3 (11.05), 32.4 (10.85), 29.3 (11.5), 25.2 (9.35)                                        |      |       |      |      |      |     |      |             |
| 18 Jun                 | 1220                                                         | 48.6 (13.8), 46.7 (13.9), 42.7 (14.35), 40.2 (11.75)                                        |      |       |      |      |      |     |      |             |
| 20 Jun                 | 1250                                                         |                                                                                             |      |       |      |      |      |     |      |             |
|                        | K                                                            | 58.1                                                                                        |      | 15.55 | 3.3  | -    | 4    | -   |      |             |
|                        | B                                                            | 53.8                                                                                        |      | 15.75 | 3.4  |      | 3.5  | 4.5 |      |             |
|                        | G                                                            | 52                                                                                          |      | 16.25 | 4.9  |      | 3    | 4   |      |             |
|                        | -                                                            | 44.5                                                                                        |      | 13.9  |      |      |      |     |      |             |
| 22 Jun                 | I discovered a gran limb in the nest tree, so add 300 acorns |                                                                                             |      |       |      |      |      |     |      |             |
|                        | 1210                                                         |                                                                                             |      |       |      |      |      |     |      |             |
|                        | K                                                            | 62                                                                                          |      | 16.65 | 9.3  |      | 8.5  |     |      |             |
|                        | -                                                            | 51.5                                                                                        |      | 15.65 | 4.6  |      | 4    |     |      |             |
|                        | G                                                            | 59.5                                                                                        |      | 17.5  | 10.5 |      | 6.2  | 7.1 |      |             |
|                        | B                                                            | 58.4                                                                                        | 34   | 17.2  | 9.2  | 9.5  | 4.4  | 8.6 |      |             |





1988

M. Stanback

3

M. FormicivorusBKOKHNHR25 Jun <sup>1315</sup>  
B 70.6 52 19.05 18.5 24 11 18.5

G 68.8 51.5 19.15 19.5 25 14 18.8

- 61.8 41.5 17.1 15.2 17 6.2 13

K 72 49 18.2 18 22.8 12 20

28 Jun <sup>1500</sup>  
- 65 59 18.3 19.5 31.4 12.2 22.2

K 78.5 66 20.25 23.5 39.4 16 30.2

G 69.9 68 20.25 21 40.7 14.6 29.5

B 73.9 68 20.6 23 39.7 16 28

29 Jun Judy reports birds in + out of PO hole

30 Jun <sup>1525</sup>  
- 74.9 69 18.6 24 41.5 15 28.2

G 78 78 20.9 21.7 51.7 15.5 36

B 83 79 21.3 21.2 51 16.5 34

1 July <sup>1330</sup>  
G 78.7 82 21.17 25.5 56 17 38.5 = 1630

- 77 73 19 23.5 47.3 15.8 31.3 1631

B 83.3 84.5 21.4 25.8 55.6 17 37 1632

3 July <sup>1250</sup>  
no 80.8 94 22.1 25 65.6 16.5 43.5

NW 79.7 85 20 26.5 57.9 16.3 37.5

GKG 78.8 92 21.85 20 65.6 14.5 45.6

9 Sept 0900 - Census - unfortunately the Swift scope swx.  
 0900-1000 I sat outside the blind, & very close to  
 the BKOK tree that they were building in in 87.  
 Saw 1006, 1009, and 1213 here. 1006 & 1213 were  
 especially interested in the hole - visiting it  
 constantly despite my nearness. At 1000 I moved  
 to BKOK proper, where I saw ♀ MD (1004?)  
 Here though, all birds disappeared upon my arrival  
 (At the border tree ACW's fiercely chasing starlings)

over →

over

saw 1006

so BO 1 way = 1400  $\therefore$  3000

✓ 5 4  
✓ 6 8  
✓ 7 17  
✓ 8 16

1988 M. Stanback

1

M. Formicivorus

A1

H/HR

Dec 87 Acorn Count: 7000

1 April 0800 2 birds at 87 hole<sup>(8)</sup>, 3<sup>rd</sup> came out soon after.

6 Apr 0845 Put up new string, then climbed. They've filled much of this cavernous hole with acorns! Must've done it in the Fall. Anyway, they're all sprouting - the birds are making a new entrance into the hole as well. This hole was just above the new "Floor" level, so I cleaned out some of the acorns so eggs wouldn't roll out. Not much of a laying surface. On the limb near the nest I found white eggshell fragments. And? Tossing? No birds in nest on arrival.

18 Apr 0730 - 0930 I break my own rule about cutting open holes early - I assumed they'd be finished laying by 18 Apr. Well, maybe they were - there are 8 fresh cool eggs - but had I waited 'til late morning maybe there would be 10. It was a time consuming climb & cut. (And a not very waterproof one - I hope they survived 19 Apr)

27 Apr 0640 Driving by I see that the door has fallen out and no one responded to my hello. Damn, I guess they failed. No! 0830 I see a bird at the hole, I bite the bullet, find the door, duct tape it up, climb the tree and replace it. They're hatching! One egg is gone, one infertile (removed)  $\therefore 8 - 1 - 1 = 6$  viable eggs, 2 ~~of~~ which have hatched.

RL = 4.2, LL = 4.0 (Time 0900)

20 May <sup>1000</sup> 1562 84 81 20.15 26 55.7 19 36

age? band bled 1563 87.2 84 20.3 23.3 56.3 22 40



$$q = 1 \text{ nt} - 1 r = 7$$

1988 M. Stanback

2

M. Formicivorus

AI

HNHR

\* Group Update \* ♂♂ 1026 & 1027 are back at uA2 (why them)

8 Jun 1330 ♀ in 87 hole. I climb. They've removed all the acorns! Of course, now I can't touch the bottom

9 Jun NOID bird in 88 nest hole

10 Jun 1230 NOID bird in 87 hole

1330 NOID bird pecking (chips?) in 88 hole. Another bird at 87.

11 Jun 1400 Adult in 87 hole

12 Jun 1345 Baby in 88 hole, 87 hole empty (hello)

14 Jun 1315 No one in either hole

1415 " "

15 Jun 1320 Bird in 88 hole, bird at 87 hole

17 Jun Jane reports incubating in 87 hole

18 Jun 1300 climb - empty, but chips. A big gopher snake was at the base of the tree (predation?) Added chips

20 Jun 1300 hello both holes - nothing

1430 bird in 87 hole

22 Jun 1300 & 1400 hello both holes - nothing

25 Jun 1520 6 Freshish warm eggs.

28 Jun 1630 7 eggs. ∴ will hatch "Jul 7"

8 July 0900 Very staggered hatching (started well before 7 July) There were 5 kids and one egg (inf? - I removed it) I don't think the 7<sup>th</sup> egg hatched & died - it would have hatched 2 day. It must've been removed earlier

RL = 6.75, LL = 16.2, RW = 12.9, LW = 9.0, B = 4.2

10 July 0915 RL = 11, LL = <sup>25.2</sup>~~25.2~~ (9.76), RW = ~~19.7~~ (9.4), LW = 17 (8.4) = K

12 July 0925 10.5 (9.6), 35.4 (12.15), 27.7 (11.8), 21.2 (10.53)

14 July 0925 9 (10.35), 39 (14), 35.5 (13.55), 25 (12.22)  
removed



1988

M. Stanback

3

M. Formicivorus

A1

HNHR

16 July

$$\begin{matrix} 0825 \\ LB \end{matrix} = 40(15.24) - (3) / K = 31(13.4) / \bar{R} = 44.7(15.38) - (2.7)$$

18 July

$$\begin{matrix} 0835 \\ 46.5(16.46)6(6) \end{matrix} / 35.4(14.8) / 54.3(16.5)6.6(3)6$$

20 July

$$\begin{matrix} 0915 \\ K \end{matrix} \quad 35.7 \quad 16.25 \quad 3.3 \quad 2 \quad 3.8$$

$$R \quad 58 \quad 37 \quad 17.75 \quad 12.5 \quad 13.3 \quad 8.6 \quad 12 \quad (3)$$

$$B \quad 55.8 \quad 37.2 \quad 17.9 \quad 12.5 \quad 13.7 \quad 7 \quad 12.5 \quad (3)$$

22 July

$$\begin{matrix} 0705 \\ R \end{matrix} \quad 60.1 \quad 47.3 \quad 18.7 \quad 19 \quad 22.5 \quad 9.3 \quad 18.4$$

$$B \quad 55.8 \quad 47.2 \quad 19 \quad 17.7 \quad 22.5 \quad 9 \quad 18.3$$

$$K \quad 31.5 \quad 25.5 \quad 17.1 \quad 6.75 \quad 2.3 \quad 6.8 \quad \text{skinny}$$

24 July

$$\begin{matrix} 0830 \\ R \end{matrix} \quad 67.8 \quad 59.5 \quad 19.4 \quad 22 \quad 32.9 \quad 12.5 \quad 25.5$$

$$B \quad 60.5 \quad 59.6 \quad 19.9 \quad 22.8 \quad 33.1 \quad 12 \quad 24.5$$

$$K \quad 27.9 \quad 28.5 \quad 17.6 \quad 8.2 \quad 9.8 \quad 5.4 \quad 10.7$$

Thus K went from 35.4 to 27.9 g. A record - no baby has done that and survived. He was still pretty vocal and energetic, but very skinny and I knew he would soon die - babies just don't make comebacks. So... I stuffed him absolutely full of meal worms (~4 g ~20 worms). We'll see.

28 July

$$\begin{matrix} 0910 \\ R \end{matrix} \quad 70.4 \quad 80 \quad 21.6 \quad 27.4 \quad 55 \quad 15.1 \quad 39 \quad 41, 43$$

$$B \quad 65 \quad 29 \quad 22.2 \quad 27 \quad 55 \quad 14 \quad 38 \quad 47, 47$$

$$R = \frac{B \cdot M}{R \cdot B \cdot R} = 1660 \quad B = \frac{b \cdot b}{M \cdot b} = 1661$$

4 Dec

 Acorn Count: 2150, 3560, 6040 6500

saw 1220, M 1660, 1340

11 Dec

 1200 - 1250: 1026, 1220, 1660, <sup>probably</sup> maybe 1661 (♂)  $\overline{M \cdot B(w)}$





1988 M. Stanback

M. Formicivorus

Big T

H NHR

29 Mar 1140 ♂ 1234 ( $\frac{R\ KWN}{KPN/LB}$ ) at Big T. (From LA2)

Dec 87 Acorn Count: 150

7 Apr 0700 Chasing & wakas & drumming - what's up?


26 Apr 0900 Found nest - lowish on S side of <sup>dying</sup> big tree in woods (E facing hole) 9 eggs (8 + 1 runt)

27 Apr 0700 Cut a door. Cavity has a hole in the back wall near the bottom that a chick could fall in. I stuck a wad of duct tape in it. Of the 9 eggs, 1 was infertile, one a runt (both removed by me) <sup>others opaque</sup>

28 Apr am No one in hole. I climb & peep - none hatched

29 Apr 0800 Hello hole, nothing! The bastards musta ~~failed~~ abandoned. <sup>duct tape!</sup>

3 May 0720 RL=10.1 LL=10.2 RW=7.5 LW=11.9 r=3.6

There was an infertile egg in the hole (!?! ) and another that seemed to die at pipping (?) as a result of being capped by a larger egg  So, all eggs accounted for

4 May 0915 12.9 13.9 10.2 15.2 3.6

6 May 0715 <sup>B</sup>18.3(8.5) 16.5(0) 12.1 20.5(9.4) <sup>W</sup>

8 May 0645 21.6(10) 20.2(10) 14.2 28.3(11.2)

10 May 0630 31.7(11.9) 26. (11.75) 19.1(11.5) 36.5(13.1)

12 May 0935 43.7(13.95) 39.5(13.5) 28.9(13.05) 50.5(14.85)

14 May 0630 50.9(inj) 2.8(2.3) | 47.5(14.7) | 35(14.35) | 56.8(16.2) 4.5(4.4)

16 May <sup>W</sup>0700 65.5 39.5 (17.2) 13.4 - 8.7 10.4

LB 59.9 32 16.3 9 - 6.2 8

- 43 15.5 2

Q 57 31 16.35 8.5 - 5.1 6.6

1 egg

1988

M. Stanback

2

M. FormicivorusBig THNHR

18 May

0800

W 72 50 18.65 19.5 23 10 18.2

LB 64 41 (17.2)<sup>inj</sup> 15.8 17.5 8.5 14 2

- 49 16.8 6.3 - 4.5 7.5 2

Q 63.5 40 (17.6) 14.2 15.5 6.8 13 2

20 May

0900

O 74.5 52 (18.6) 22.7 26.5 12 21 2

- 62 39 (18.05) 12.5 14.2 8.5 14.5 2

LB 74.5 54 (18.2) 21.2 28.4 12 21.5 2

W 80.5 63 (19.3) 22.7 34.5 15.5 24.5

23 May

1900

B 77.4 71 (21.15) 24 45 15 32.5

O 77 68.5 (20.7) 23.5 43.5 16 31.5

W 82.3 81 (21.2) 25 52.7 15.5 36

- 67.5 56.5 (20.05) 17.7 29.6 12.2 24.5

26 May

1600

OKO 73 87 <sup>inj healing</sup> 21.5 23.5 60.5 21 45

All other babies dead & very rotten (like sev days) One didn't have a head. Predation - weasel or pyg owl. So wasteful. I don't think it was because of infections (wouldn't have died that quickly) OKO looked fine. Damn.

28 May

1600 71.9 95 (~~22.2~~)<sup>reinj</sup> (22.2) 22.5 20 16.5 48

10 Jun

1400 Hello hole - nothing

14 Jun

1410

1 Oct

0920 Stopped by for quick census: ♀ 1319, ♂ (I guess - not a very definitive ♂) 1565, an ♂ 1612 (♂). So what's ♂ 1612 from LA2 doing here - is he a breeder?

4 Dec

Acorn Count: 200 Saw ♀ 1319



1988 M. Stanback

M. Formicivorus

KOUT

HNHR

29 Mar 0910 NOBA ♀ at KOUT what's going on here. Watched 0930-1030. There are at least 2, probably more NOBA ♀♀ here. They spend a lot of time in the granary eating acorns. There were seen in the company of ♂♂, peaceful. There's lotsa chasing, wakas, garricks. A lot of the action is towards ARSW. Saw Big Tree ♀ 1319 (all bands) up here. ♂ 1127 seen here. Also saw ♂ M/D B with lotsa tail spots - who is this? A1 ♂ 1027? The 87 nest tree is finally dead - and a big chunk of it (including the 87 nest hole and the horiz roost holes) has fallen - rather recently. This explains the power struggle - some birds must have died. The tree fall is recent enough to have green grass under it, but old enough to have a wood rat house built in it. No bodies found in roost hole.

Dec 87 Acorn Count: 6312 + 1450 (ARSW?) = 7762

6 Apr Roost Watch: Plenty of activity here - lotsa wakas & flying back & forth in groups. Several birds roosted in a new hole in main granary. The higher of the 2 new ones on this limb (wasn't able to watch the other hole).

21 Apr 1000 Bird flew to low E facing hole in burned live oak (Jane had seen some last week)

27 Apr 0800 1 egg, #1.

30 Apr 0745 No eggs

2 May Bird in hole in granary!

3 May 0800 Climbed - a horiz hole - peeped both directions but couldn't



1988

M. Stanback

2

M. FormicivorusKO.U.T.HNHR

(3 May) see anything. Cut a nice door, reached my whole arm in both directions - but couldn't reach end of hole.

8 May - nothing in low hole but fresh chips

10 May 0650 Peep low hole - nothing. Repair high hole.

12 May Hello - nothing

14 May hello - nothing, peep low hole - nothing

16 May hello - nothing

20 May hello horiz hole and bird Flushes

23 May 0640 hello all holes - nothing.

0800

"

/ 0900 try again, nothing

26 May 1730 No wonder, the nest is on this side of the fence, in the 2<sup>nd</sup> big tree up no-man's-knoll in a small (very) very dead snag. I tore a hole in it to get the kids out (later patched w bark & moss) One fledged but I caught him. No banding gear w me, so ...

1586

Mauve  
mauve

80

103

~~20~~

22.1

29.5

75

15

49

Y

1587

DB/DB

78

98

21.5

25

69.5

20

45

P

1588

LPink/0

85

105

20.55

26

76

24

48

G

1 Jun 1500 Bird (♂ ad) in horiz limb hde, but some dork took string

8 Jun 1130 hell'd holes - nothing. Suspicious Flush S side dead?

1400 Another Flush From S side dead gran.

10 Jun 1330 Hello holes - nothing.

28 Jun 1538 Arrive via ATV, start to hello nest hole when

I hear a scream towards burn tree. I walk over

to investigate and a Cooper's hawk Flushes from the ground - Followed by an ACW flying with

some difficulty. It goes straight to the 88

tease<sup>egg</sup> hole in the burn tree, looks at me, then



1400 - 14<sup>4</sup>~~80~~

1330, . . .

OKO (v)

at myst gran

11

1111 + 1211

1988

M. Stanback

3

M. FormicivorusKONTHNHR

(28 Jun)

Flies to the back side, then flies to the high W hole. I walk around and an adult ♀ has her head out. Is this the victim. I searched for the impact site (for painted rump feathers) but found nothing at all. My guess is the hawk took advantage of my distracting the birds and hit one. I don't think they knew it was coming because I noticed a bluebird acting rather normally (and heard other birds) after (just) the scream. The scream lasted about 1-2 seconds and stopped. The hawk fled @ 10 sec later. Why did the Acw stop screaming? If the intent was to draw a predator to the predator, it worked - but why did it stop screaming? (Screams are to startle the pred - once it's obvious that it didn't work, all screaming would accomplish is to make the hawk squeeze harder.)

5 July

1400 Bird at mystery gran flew to KONT.

30 Sept

0645-0830 Census: 1127, 1219, 1221, 1382, 1016, 1669 (tho I tho I saw a LB), 1670 (that sure was stupid to give her the same bands as J1587), and ♂ LB-K/R-LB / LB-DB (I suppose this is 706). These birds are spending an inordinate amt of time at the high hole in the (now completely dead) live oak gran. Gee, not a nest is it? No, the door is gone from that hole - they're building a new door @ 4 feet below

1 Oct

0845 Put door back in hole. There were some feather remains - is this the bird hit by the hawk?  
 ↳ very few though. SEE BACK OF PAGE →

4 Dec Acorn Count: 3800 Main gran  
250 Burn snag  
250 fallen piece of snag  
800 misc grans in grove  
4100 total  
1000 mystery gran

1988 M. Stanback

M. Formicivorus

ARSW

HNR

29 Mar 1100 Saw ♀ 1279 near KOUT ( $\frac{R-LB/M}{LB/R}$ )

Dec 87 Acorn Count: 780 (1450 in myst limb by Kout)

6 Apr 1745 Bird into 87 nest hole

7 Apr 0830 5 warm, but not completely opaque eggs (#1-5)

14 Apr 0845 Snow on chews ridge - cold, windy, wet. RL = 7.5 LL = 10.7  
RW = 10 LW = 6.1 r = 4.5 (All kids were skinny and pale -  
RL hatched 13 Ap, LL 12 Ap, RW 12 Ap, LW 13 Ap, r 13 Ap)

17 Apr 0915 RW = ~~10~~ 19.2 (9.45) = M, LW(?) 11.6, B = 17.3 (9.2) = G  
RL = 14.1 (8.9) LL = 9.4

19 Apr 0845  $\frac{G}{M} = 23.3 (10.95) / M = 27 (10.95) / \frac{LW}{K} = 14 / \frac{RL}{V} = 19.8 (10.65) / LL = 13.4$

21 Apr 0930 31.6 (12.5) 33.5 (12.5) / 19.6 (10.4) / 25.7 (12.35) / 18.3 (9.7)

26 Apr 0745 <sup>antst</sup> 52.8 (15.65) 5.4 (5.8) / 56.5 (15.8) 9 (7.8) / 36 (13.7) / 46.2 (15.7) 4.9 (3.8) / 31 (13.1)

29 Apr 0930

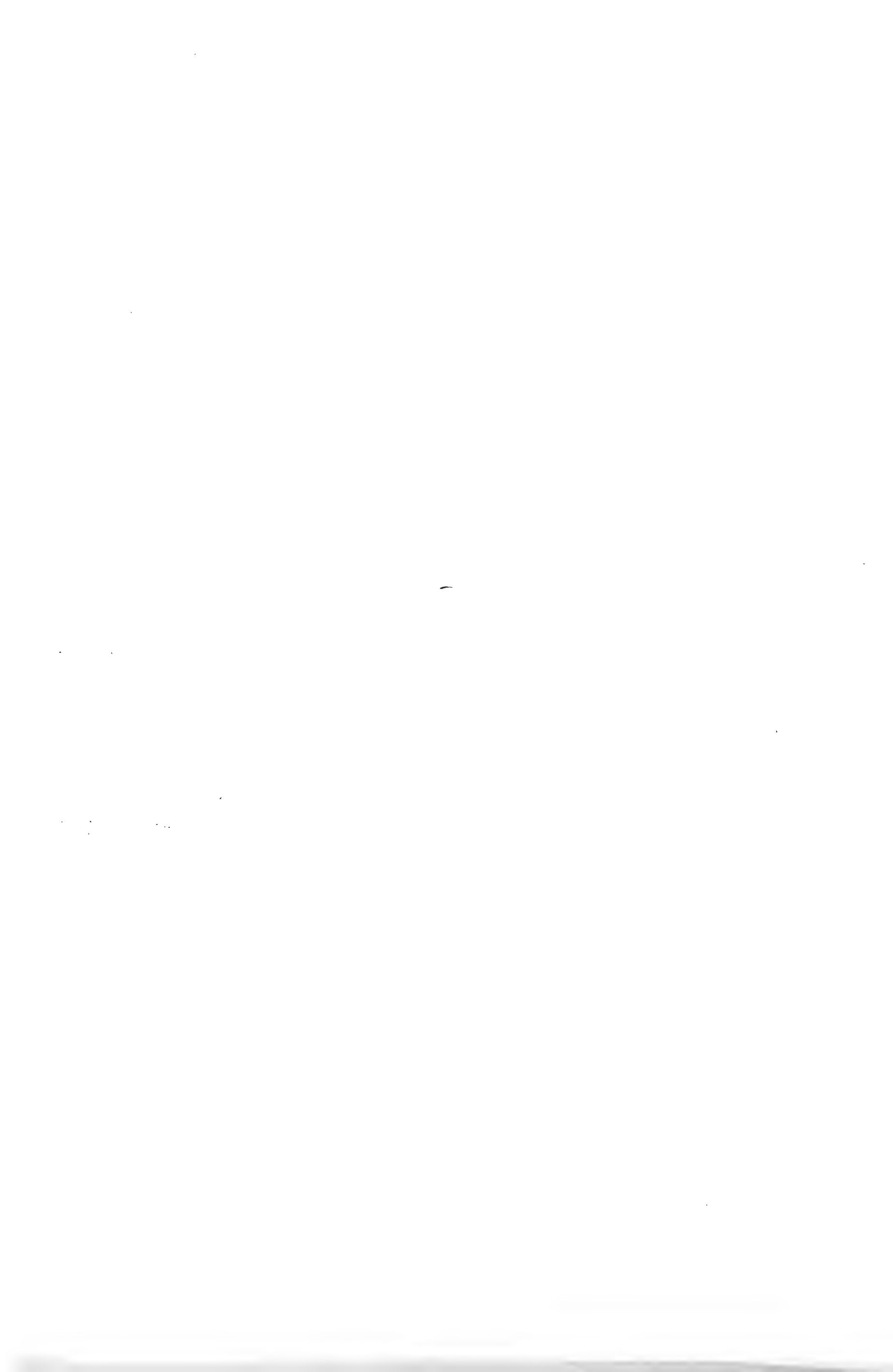
|   |      |    |       |      |               |      |
|---|------|----|-------|------|---------------|------|
| Y | 60   | 42 | 17.3  | 16.1 | 9.5           | 14.5 |
| - | 46.8 |    | 15.2  | 4.2  | 3             |      |
| K | 47.6 |    | 15.35 | 6.85 | 4             | 6    |
| G | 66   | 44 | 17.2  | 16.5 | 17.8          | 14   |
| M | 69.1 | 50 | 17.4  | 20   | <del>24</del> | 12   |

1 May 0700

|   |      |      |       |      |      |      |      |
|---|------|------|-------|------|------|------|------|
| Y | 61.8 | 53.5 | 18.2  | 24.5 | 26.6 | 15.5 | 22   |
| K | 49.9 | 37   | 16.1  | 12.1 | 13.1 | 6    | 10.7 |
| M | 68.4 | 61   | 18.4  | 25   | 34.7 | 15.5 | 26.1 |
| - | 48.8 |      | 16.25 | 9.1  | 5.4  |      |      |
| G | 65.2 | 55   | 18.1  | 22.1 | 28.2 | 13.7 | 22.2 |

4 May 0800

|     |      |    |       |      |       |      |          |
|-----|------|----|-------|------|-------|------|----------|
| KM  | 58.8 | 54 | 17.35 | 22.3 | 29    | 12.4 | 21.7 = K |
| Yon | 58.5 | 48 | 17.6  | 19.1 | 22.75 | 11   | 18 = :   |
| Y   | 68.5 | 71 | 19.5  | 29.2 | 43.7  | 19.7 | 33       |
| G   | 73.8 | 72 | 19.5  | 25.8 | 45.1  | 18   | 33       |
| M   | 74.9 | 79 | 19.7  | 23.7 | 51.2  | 20   | 37       |



1988

M. Stanback

2

M. FormicivorusARSWHNHR

8 May

0830

MWG

75

100

21.2

24.3

72

22

50.8

1504 green

YON

62

69

19

26

42.9

15.5

1501 blue

PKY

68.5

91

21.2

29

66

21

46.8

1502 pink

KM

59.5

77

18.7

25.5

49.7

17

34

1500 red-blue

NG

73

93

21.1

23.7

66.7

16

46

1503 yellow

12 Jun

1330 At the mystery granary I see several juvs, but the only bands I got were OKO. No KOUT Kid has anything similar, so I think this is 1504 (KOMU). This makes this an ARSW granary. I watched (from a blind) the granary from 1400-1445 but no one came.

28 Jun

The pond here is dry (bye tadpoles + clams)

5 July

1400 A bird at the mystery granary Flies to KOUT

30 Sept

0900-1015 Census: + ID: 720, 1280, 1503, 71502

4 Dec

Acorn Count: 1450 in gran

(1000 in mystery gran)

✓  
9 now

✓  
9 MR Y

✓  
9 R Y R

✓  
8 PG  
m

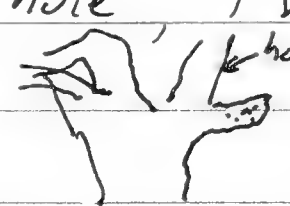
✓  
8 MY

1988

M. Stanback

1

M. formicivorusLAMBHNHR

29 Mar 1115 Nest? Bird flushed from new hole low in 86 nest tree. SE facing. Low hole 1 m above gran snag. View from W 

31 Mar 0950 Bird in hole again. Saw at least 3 birds here, saw ♂ MT. This means 762 isn't the only ♂ here.

Dec 87 Acorn Count: 4200

1 Apr 0915 Opened hole - 7 Fresh eggs!!

6 Apr 0730 Final clutch = 7 eggs. Didn't measure - beaucoup d'ants.

11 Apr 0745 Hatched yesterday, I knew it. RL = 7.2 LL = 5.2 RW = 5.8 LW = 8.8

12 Apr 0710 RL = 11.2 LL = 8.5 RW = 9.3 LW = 12.8 B = 4.3 BF = 3.15

13 Apr 0720 14.9 11.5 12.8 16.2 5.75 2.75

1 removed egg →

15 Apr 0910 21.6(9.8) 16.7 18.75(9.8) 21.7(10.8) 5.15

17 Apr 1040 28(11.45) 22(11) 22.4(11.5) 27(12.45)

19 Apr 0915 33.4(13.1) 27.2(12.4) 28.9(12.75) 31.5(13.8)

2 adults in hole - 1 stayed in

21 Apr 0950 40.5(14.3) 33(13.6) 32.4(13.7) 38.6(14.9)

23 Apr 1000 46(15.7) 39(14.9) 39(14.95) 42.9(16.1) 4.2

26 Apr 0815 This was the worst ant situation I've ever seen. The

hole was a seething mass of ants - I don't know how (or if) the adults were able to land to feed.

The whole tree was covered. In the 50 sec it took me to get into the tree & to the kids, I was covered. Inside the nest, the kids were relatively ant-free. I did measurements on the ground. In opening the door and getting the kids out, I squashed lots of ants - I hope the kids are alright.





1988

M. Stanback

2

M. Formicivorus

LAMB

HNHR

| (26 Apr) | 0815                                                                                                                                                         | W+   | Chor | Bill  | 1°S  | 1°   | TS   | T        |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-------|------|------|------|----------|
|          | BW                                                                                                                                                           | 55   |      | 17.3  | 11.5 | 12.5 | 4.8  |          |
|          | R                                                                                                                                                            | 50.5 |      | 16.5  |      |      |      |          |
|          | PB                                                                                                                                                           | 49   |      | 16.2  | 6.4  |      | 2.0  |          |
|          | BO                                                                                                                                                           | 58.5 |      | 17.1  | 5.8  |      | 3.3  |          |
| 29 Apr   | <sup>0640</sup><br>R                                                                                                                                         | 59.6 | 32   | 17.7  | 9.4  |      | 7.5  |          |
|          | OK                                                                                                                                                           | 69   | 43   | 18.3  | 16   | 17.5 | 13.5 | 15.3 (2) |
|          | bW                                                                                                                                                           | 65.5 | 50   | 18.5  | 18   | 25.2 | 12.5 | 16 (2)   |
|          | Pb                                                                                                                                                           | 60   | 41   | 17.6  | 16.5 | 17.5 | 9.5  | 13.5     |
| 2 May    | <sup>0900</sup><br>R                                                                                                                                         | 68   | 47   | 19    | 20.3 | 23   | 15.6 | 17       |
|          | OK                                                                                                                                                           | 78.3 | 62   | 20.1  | 21.6 | 34.3 | 22   | 26       |
|          | bW                                                                                                                                                           | 71.8 | 67   | 20.4  | 26.5 | 40.6 | 22   | 25.7     |
|          | Pb                                                                                                                                                           | 65.5 | 61   | 18.9  | 23.5 | 34.1 | 13.5 | 22.5     |
|          | $1488 = bw = \frac{DB \cdot LB - W}{LG \cdot LP - n} = \text{blue}$                                                                                          |      |      |       |      |      |      |          |
|          | $1489 = OK = \frac{n \cdot OK}{RWN - 0} = \text{pink}$                                                                                                       |      |      |       |      |      |      |          |
|          | $1490 = Pb = \frac{W \cdot LG}{LB} \cdot \frac{n}{DP - LB} = \text{yellow}$                                                                                  |      |      |       |      |      |      |          |
|          | $1491 = R = \frac{LP}{n} \cdot \frac{R}{KWN} = \text{green}$                                                                                                 |      |      |       |      |      |      |          |
| 6 May    | <sup>1000</sup><br>MOK                                                                                                                                       | 81.5 | 84   | 21.9  | 27   | 56.9 | 13.5 | 39.3 P   |
|          | PR                                                                                                                                                           | 76.5 | 71   | 20.8  | 24   | 44.3 | 14   | 30.8 G   |
|          | BBW                                                                                                                                                          | 74.9 | 90   | 21.65 | 26.5 | 63.7 | 15.5 | 39.5 B   |
|          | W&M                                                                                                                                                          | 65   | 83   | 20.55 | 27.8 | 56   | 15.9 | 36 Y     |
| 22 May   | Jane reports birds (adults) playing in hole uphill from nest tree                                                                                            |      |      |       |      |      |      |          |
| 23 May   | 0830 what hole?! I climb to the "obvious" one and it's a dead end. There's a nasty <del>one</del> old one below it, but it just has acorns and leaves in it. |      |      |       |      |      |      |          |
| 7 May    | 1215 Hello holes - nothing - though there are some nice looking ones (esp high w facing in 88 nest tree)                                                     |      |      |       |      |      |      |          |



1988

M. Stanback

3

M. FormicivorusLAMBHNHR

- 1 Jun 1410 - 1450 Hello'd holes - nothing. Checked 88 hole - nothing.  
Sat in blind  $\frac{1}{2}$  hr - lotsa birds around, but none to holes -  
busy Feeding juvs (I think I saw 1488, heard others)
- 8 Jun 1410 Hello holes - nothing.
- 10 Jun 1345 " " . However, I saw/heard definitely  
3 and I'm pretty sure 4 of the kids. Need a juv watch.
- 11 Jun 1350 Hello holes - nothing.
- 12 Jun 1340 " "
- 14 Jun 1400 " "
- 28 Jun 1550 Arrive + hear 3 kids. See  $\overline{00} = 1489$ ,  $\overline{LL} \overline{BFB} = 1490$
- 3 Jly 1430 Hello holes - a bird Flushes suspiciously from  
the back side of the nest tree. I check it out - a  
hole! I climb + peep - empty, and has some chewed  
acorn shells in the 'bottom' (ie old mouse-ness). Oh well.
- 5 July So... the damn Tombos suck too. Anyway 1340  
Bird Flushes from back of nest tree. I peep hole.  
Are there a couple fresh chips in there?
- 10 Jly 1020 Hello'd holes - nada. Checked 'new' hole - nada.
- 30 Sept 0915 Cruise by. See ♂ 1489, NOBA ♂, ♀ 1490
- 4 Dec Acorn Count: 14 Downed log by pond  
560 Nest tree  
195 downed log under nest tree  
"1000" hillside tree  
"2000" main log
- 3800
- = total
- 
- saw: 916, 1488, 1489



1988 M. Stanback

M. Formicivorus

1

FAAR

HNHR

29 Mar 0900 Saw ♀ 834 ( $\frac{WK}{RKW}$ ) and ♂ 1023 ( $\frac{LB}{w.LB}$ ) she was drumming, and was doing a little chasing. ♂ 835 ( $\frac{ML}{}$ )

Dec 87 Acorn Count : 4122

31 Mar Judy reports bird into 87 nest hole - only once though, and for only 30 sec. She also reports birds showing interest in a hole in the 86 tree - in a new E facing hole @ 5 feet above last year's guesser.

4 Apr 1315 Bird in 87 nest hole. Where's the string  
1415 2 Fresh eggs : dirty = #2, clean = #1 (but ??)

8 Apr 0800 3 eggs, 1 new. Um... they're not especially warm (or cold), they're not really opaque, and there was no bird in the hole on arrival. (1)  $25.9 \times 19.55$ , (2)  $26.7 \times 19.5$ , (3)  $25.7 \times 19.1$

17 Apr 1015 RL = 4.1 LL = 4.85 egg #1 not hatched

18 Apr 1045 8.0 8.85 "

21 Apr 1030 G = 19.7 20.8(9.35) = B + egg

26 Apr 0700 43.4(13.9) 43.2(13.9) + egg

29 Apr 0830 B = 64.5(16.1) 6.2(2.3)  $\bar{G}$  = 65.9(16.3) 4.1(2.5)

1 May 0915  $\bar{B}$  71.9 41 17 13.7 6.7 9  
 $\bar{G}$  74 39 17.5 10.9 5.5 9.4

6 May 0900  $\bar{B}$  87.4 70 19.85 27.7 41.5 17.3 28.2

$\bar{G}$  90.1 67 20.55 25 37.5 17.3 27.5

9 May 0900 G 93.4 85 21.95 30 54.8 19 37.2

B 87.5 86.5 21 31 59.2 23 38.5

12 May 0700 RWB 91.1 103 22.5 28 75.5 17 48 blue 1528

G? 98.3 100 23.3 27.5 71.5 19.7 47.3 yellow 1527

23 May 0715 Jane saw no kids yesterday + saw adults in the hole. I peeped hole - empty. Hole below empty but w fresh chips.




1988

M. Stanback

2

M. FormicivorusFAARHNHR

- (23 May) 1 Found some baby woodpecker feathers below the nest. They must have been predated.
- 27 May 1100 Peeped lower hole - 3 eggs. But they've deepened it and I can't reach.
- 28 May 1430 Added chips to get to eggs (4 of em)
- 9 Jun 1300 Only 3 eggs now, and 2 are inf. The one that looks OK isn't even pipping (and should have hatched yesterday)
- 10 July 1245 Still not hatched - no one in hole. Failed (?)
- 14 Jan 1345 New Nest (?) Bird in E Facing hole in the other tree. Hole is the one where the limb gets fat. 
- 15 Jan 1340. No one in hole on arrival. Climbed & peeped. Empty, but does have 'Fresh' chips. Did I hear a juv.
- 22 Jun 1315 Bird from r to hole - and I brought no saw.
- 25 Jun 1440 Peeped hole - empty, but Fresh chips. No one in hole on arrival.
- 30 Jun 1620 Hello holes - nada.
- 3 July 1330 " "
- 5 July 1300 Bird in the new hole - but I have no saw.
- 6 July 1315 No one in hole - climb - no eggs.
- 10 July 1010 Hello holes - nada
- 30 Sept Jane reports ♂ w/ incubation-like behavior in the higher nest hole. I climb it - empty.
- 4 Dec Acorn Count: 3500 E gran

100

nest tree

200

bat tree

250

snag

50

NW tree

4100

total





1988

M. Stanback

1

M. FormicivorusUAZHVHR

Dec 87 Acorn Count : 8600

31 Mar 1030 - 1130: watched 87 hole - nothing. After I snooped + Found a bird in the 86<sup>b</sup> hole in the live granary

1 Apr 0945 Checked yesterdays hole - no eggs, but good shape (?)

4 Apr 1245 Checked hole - nothing. Where's B9?

6 Apr 0800 Fresh egg - marked #1. Life's a bitch.

7 Apr 0900 Marked today's egg #2 Both very cold.

8 Apr 0840 " #3 "

11 Apr 0815: (1) 24.75 x 19.45, (2) 26.1 x 19.7, (3) 25.35 x 19.65, (4) 25.3 x 19

(5) 25.55 x 19.8. Egg 4 was dirtier than 5

21 Apr 0715 RL = 4.1 LL = 4.6 #5 pipping. Egg 1 hatched 1<sup>st</sup> then #2, then #3. But there are only 2 kids!?23 Apr 0730 <sup>5.1</sup>RL = 9.2 <sup>?</sup>LL = 9.9 RW = 8.1 r = 4.4. Did I miss a kid on 21 Ap.? There were no eggs.

26 Apr 0615 RL = 17.8 (9.25) = (P) LL = 19 (9.8) = (G) RW = 17.1 (9.6) = (B) r = 9.8

28 Apr 0630 26.2 (11.1) 29.2 (11.9) 25.7 (11.9) 17 (9.6)

1 May 0745 33.8 (13.2) 36 (14.05) 36.4 (14.25) 25.7 (12.15)

3 May 0900 44 (14.3) 47 (15.15) 12 42.9 (15.95) 36.1 (14.1)

6 May 0815 51.5 (15.95) 7.7 (7.6) | 57.5 (16.55) 11.1 (11.3) 3.2 (5) | 53.3 (17.5) 7.45 (5) | 42 (16.05) 4.0

8 May 0715 b 62.8 38 18.35 13.4 14.6 8.8 10.5

- 50.8 28 17.2 7.7 3.4

G 61.9 43 17.4 16.2 19.7 8.3 11.7 (2)P 57.4 38.5 17.05 14 15.4 12.3 -10 May 0730 b 59.1 37 17.8 14 15.7 18.1 - ? (2)?B 74 51 19 18 24.3 15 17G 70.6 56 18.25 20.5 30 13 19 (2)?P 67.2 49 17.6 19.8 26 17.5 -

*(Faint handwritten notes)*

2

UAZ wt chor bill 10s 10 TS T HNHR

|                        |   |      |    |       |      |      |      |      |        |
|------------------------|---|------|----|-------|------|------|------|------|--------|
| 14 May                 | B | 79.5 | 75 | 21.2  | 25.5 | 46.2 | 18   | 30   | banded |
| get<br>time<br>cap rec | P | 72   | 74 | 19.35 | 28   | 48.7 | 25.5 | 32   | day    |
|                        | - | 69.8 | 62 | 19.9  | 25.1 | 36.7 | 16   | 20.5 | 23     |

Jane reports no nestiness during juv watch

10 June 1330 " - juv in 89 hole.

|        |      |                                           |
|--------|------|-------------------------------------------|
| 12 Jun | 1330 | Climb 88 hole and open - empty and dirty. |
|--------|------|-------------------------------------------|

|        |                                |
|--------|--------------------------------|
| 18 Jun | Jane reports adult in '88 hole |
|--------|--------------------------------|

|        |      |                                                  |
|--------|------|--------------------------------------------------|
| 20 Jun | 1330 | 5 fresh but warm eggs in 88 hole (r lotsa mites) |
|--------|------|--------------------------------------------------|

30 Jun 1600 shit  $RL = 15.3$ ,  $LL = 15.3$ ,  $RW = 15.75$ ,  $LW = 12.2$ ,  $3.6 = \text{yester day}$

1 July 1225  $R_L = 18.7(8.2)$ ,  $LL = 17.2(8.2)$ ,  $RW = 18.8(9.1)$ ,  $LW = 14.7$ , 3.39

1000

1988

M. Stanback

3

M. FormicivorusUAZHNHR

3 July

1345

RL  $Y = 26.7(10.25)$ ,  $LL = 26.9(10.3) = \bar{R}$ ,  $RW = \underline{DB} = 27.3(11.7)$  $LW = 23.8(9.9)$ .

5 July

1320

 $Y = 32(11.6)$ ,  $R = 33.3(11.75)$ ,  $B = 35(13.45)$ ,  $- = 29.2(11.35)$ 

6 July

1245

 $38.8(12.27)$ ,  $38.8(12.6)$ ,  $39.8(14.1)$ ,  $32.9(11.9)$ 

8 July

0940

 $43(13.9)$ ,  $44.9(14) - (2.8)$ ,  $48.3(16)$ ,  $4.1(4.1)$ ,  $38.5(13.5)$ 

10 July

0955

 $Y = 48.9$  15.25 6 2.5 5.2DB

52.8 17.7 9.75 8.6 -

-

44 15.5 5 3.7 -

 $\bar{R}$ 

56 15.75 6.5 3.7 5.3

12 July

Y

53.5 35 16.15 11.5 12.1 4.3 9

-

46.9 31 17.1 9.8 10 5.2 7.4

B

51.8 43 19.05 16 18.9 8.8 15

R

60 37 16.9 13 13.8 6.5 11

14 July

1005

- 50 40 17.75 15.8 17.7 8.1 12.5

Y

53.2 43.7 17.05 14.9 20.3 9.5 15.1

R

64.1 47 17.8 18 23.1 11.8 18.5

B

53.5 51 19.45 18.5 27.6 12.6 20

16 July

0905

Y 57.5 54 17.7 20 28.9 12.5 21.7

R

68.5 58 18.55 23 32.5 16.5 25.1

B

52.9 60.5 20.25 ~~21~~ 21 35.8 14.2 25.3

-

56 49 18.37 18.5 26 12.2 18.7

18 July

0910

R 69.4 68 19.9 23 43 19 32.2

Y

64 64.8 18.25 21.5 38 15 27.5

-

58.4 60.5 19.25 22.5 36.4 17 25

20 July

1000

R 70.9 79 20.7 25.1 54.2 19.5 39.1 WBM

-

55.7 70 20.3 23.7 46.2 18 31.4 MO 1657

Y

54.6 72 18.7 24.4 46.1 15.5 33 NY 1658

B gone!

jumpy

52 hr my

1659  
1656



1988

M. Stanback

4

M. Formicivorus

UA2

HNHR

22 July

0750

WBM

61.8

88

21.3

24

62.6

17.5

44.3

R

49

77

21.1

22.3

52.5

18

35

G

Y

47

76

19.2

23

52

14.7

34.8

dead

11 Dec

Acorn Count : dead gran = 2600

log under it

300

limb uphill

300

live gran (nest tree)

1300

1 hole filled

2100

total

4600





1988

M. Stanback

1

M. FormicivorusLAZH NHR

29 Mar 0810 Door to 87b nest hole had fallen out. I replaced it, but didn't have a hammer. Saw 1117 ( $\frac{RW}{OW}$ ). Also saw NOBA ♂, who seemed at home here and was chasing intruders, of which there were several. ♀ 1117 was chasing another bird. The NOBA ♂ has been here @ 1 yr, why was he removed?

1140 ♂ 1234 is at Big T

Dec 87 Acorn Count: 5900

11 Apr 0900 Repaired 87b hole

28 Apr 0700 Nest! Incest! (?)! Hatched today. 3 hatchlings and one egg - in the hole that mom was found dead in last year. Deep hole. Will cut tomorrow. Clutch 4 = incest?

29 Apr 0800 - 0900 Cut hole (nice job) RL = 9.1, LL = 10.7, RW = 7.8, LW = 5.6

30 Apr 0815 RL = 12.1 LL = 14.4 RW = 10.7 LW = 7.55

1 May 0830 14.8 18 12.4 10.4

3 May 0630 23.7(10)=0 28.1(10.9)=K 20.5(9.15)=G 14.4

6 May 0730 Dead Babies. They had been killed. Though the weather's been bad, they didn't appear to have starved. All had peck marks. I also found 2 crown feathers in the nest. My guess is infanticide - the breeder ♀ (assume it's the daughter) died and was replaced. However, I never heard any weirdness here. Baby weights are as follows:

16 May 0800-0915 Census: ♀ 1371 ( $\frac{MV-LB}{R}$ ) and 1117 ( $\frac{R}{W}$ ) Also 2 ♂♂ (I think). I had  $\frac{LBDB}{RW} \frac{LB}{LB}$  or something like that. Birds flew to nest area, but hello got nothing.



1988

M. Stanback

2

M. FormicivorusLA2HNHR

23 May 0745 Hello nest hole - nothing. But a bird did Flush From the top of the tree, and I remain suspicious. Manaña.

27 May 1130 Hello'd holes - nothing. On a whim I climb the 88 hole - nothing. However, there's a nice new hole in the 87a tree

28 May 1530 Hello holes - nothing. Lotsa Mariposa lilies here

1 Jun 1625 Nest! In low, cut-out, N facing hole in dead gran

29 what?

LB = 13, noba = 11.1 (LB inj bill) no other eggs

8 Jun 1300 Well, I remember on 1 Jun not being satisfied w the peep, and I kept pulling out acorns & acorn shells, so I finally decided that there were no more eggs (esp since the kids there seemed to be skinny (day 2-3 kids?)) Well, I guess there was another egg that hatch late (very) LB lost his band. I'll assume he's now DB = 39.5 (12.5)

LP = 34 (12.4) and the runt = 7.6 (amazing) My guess is that laying got all messed up due to incest. I caught an adult in the hole: ♂  $\frac{MB}{BW \& W} = 611$

Bill = TEC = TC = 31, TN = 24.3, chor = 144, Tail 83

9 Jun 1345 Caught another adult in hole ♀  $\frac{MLB}{R} = 1371$

photo  $\overline{B}$  TC = 30.8 TN = 23.4, P = 38 (12.9), PB = 42.8 (13.3) 7.7

10 Jun 1315 P = 42 (13.75) TS 1.5 B = 48.4 (13.9) TS 1.5 bye runt...

11 Jun 1330 44.8 (14.3) + 2 (3) 51 (14.4) + 2.8 (4.8)

12 Jun <sup>P</sup> 1300 52 14.7 3.4 - 2.7 5

B 57.4 14.8 3.3 - 4.5 7

14 Jun <sup>B</sup> 1325 71.9 15.8 8.5 - 9 13.5

P 63.8 15.85 7.8 - 7 10.7

18 Jun <sup>B</sup> 1345 81 55 18.1 21 27 13.8 27

P 73.8 52 18.0 20 25.5 16 23



1988

M. Stanback

3

M. FormicivorusLAZHNHR

20 May 1400 / come to band the babies and I hear a juv.  
 He's in the <sup>live tree</sup> granary with the other birds. No binocs  
 but I sure hope he's a neighbor (UA?) coming to see  
 what they're so upset about.

B 79.9 65 18.85 22.2 37 15.5 33.6 (2)

P 72.4 63.5 18.7 25 35.8 18 30

22 Jun 1240 P 76.3 73 19.4 23 45.2 22 37

B 80.3 74 19.5 23 46.9 18.5 39.6

25 Jun 1355 NB 81.3 89 20.8 22.7 62.3 14.5 49.3 I hear  
 - 79 86 20.7 24.5 60 23 46.5 babies  
 juvs11 Dec Acorn Count: 1<sup>o</sup> gran 4200

in the woods 1600 total = 5900

88b nest hole filled ~100



1988 M. Stanback


M. Formicivorus

BLAN

HNR

29 Mar 0800 Bees back in base of nest tree

Dec 87 Acorn Count : 1900

7 Apr 0730 New nest tree (good! its @ time). They are in a hole in the holey live tree beside the half-fallen 85 nest tree. The hole faces down the ravine 

8 Apr 0900 Opened nest : 7 incubated eggs, # 1-7.

15 Apr 0815 Good timing - they're hatching RL = 4.25 LL = 4.05

17 Apr 0800 8.6 8.2 6.85 6.55 5.6 5.9 2.9 <sup>all hatch 16 Apr</sup>


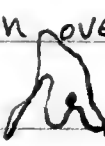
18 Apr 1000 ~~WTR~~ <sup>RL</sup> 12 10.8 11.3 9.2 9.1 6.1

19 Apr 0745 <sup>14.2</sup> ~~WTR~~ 12.5 13.3 11.6 10.8 <sup>6.8</sup> ~~6.8~~

21 Apr 0805 (R) = <sup>RL</sup> 20.6(10.55) / (G) = <sup>LL</sup> 18.3(9.9) / (B) = <sup>rw</sup> 18.5(9.25) / (M) = <sup>lw</sup> 16.5(9.1) / 12

23 Apr 0830 25.8(12.1) 22.9(11.6) 22.9(10.8) 23(11.1) 16.1(10.6)

ship → 28 Apr 0745 ~~WTR~~ 45.7(15.95) 43.2(15.3) 44.25(14.5) 42.8(15.1) 34.7(13.95)

The little one has a deformed beak . This is because the skin was grown over the left nostril and was "pulling" that side back . I pushed back the skin, opened the nostril and removed some pasty yellow gunk.

30 Apr 0900 ~~WTR~~ Wt Chor B.W I's I TS T  
- 41 15.85

B 52.1 15.95 5.7 3.3

G 48.3 16.75 6.4 2.7

M 51 16.35 4.6

②?

R 53 17.55 4.6 2.3

4 May 1015 G 60 47.5 18.8 19.5 22.9 6 11.5

M 67 45 18.5 19 20.5 9.2 12

B 64.8 46 18 17 21.1 7 12

- 55 34 17.7 10.7 - 6.3 8.5

R 67 46 19.3 20.1 21.3 8.6 13.5





1988

M. Stanback

2

M. FormicivorusBIANH/NHR

10 May

0845

OKO

76.2

78

20.35

21.2

52.2

12.5

30

RM

81.2

78

21.45

27

51.9

16

32

MKG

71.5

62

20

26

36.2

15

25

MGW

72

77

21.15

23.5

51.5

13.5

28

NM

75.5

77

20.55

23.5

50.8

15

28.5

12 May

MGW

73.5

89

21.9

26

61.8

14.2

35

B

NM

75.5

87

21.2

25.5

61

16

34.5

Y

79.5

87

22.4

27

62

17.5

36.5

P

MKG

74.5

74

20.95

29

47.8

14.5

30.7

G

OKO

77

88

21.2

22.6

62.7

17

37

RB

1030

8 May

R

71.8

67

20.85

25

42.2

15

26

M

67

65

20.1

22.5

40.6

13.8

22.2

-

59.5

51

19.4\*

18.2

25.8

11

18.2

G

62

68

20.5

25

42.2

11.5

22.3

B

65.5

68

19.5

24.5

42

12

24.4

9 Sept

0705-0845. Census. The Swift scope is worthless. Saw 1515 (♂), 1516 (♀), 1517 (♂) 1515 + ID, 1516 MRW, 1517 WO. The birds never went to the granary. They spent their time at the W end of the field. They also visited the bee tree hole alot. They spent a little time near the BKOK border at the N edge, picking acorns 1000 Chasing at N border. Saw 1518 ♀ 1045 See 5 w O,R,M on rt. At first glance ♂, but may be a tiny bit of ♀ in forehead (but other ♀ is all changed)

over →

Bian 11 Dec: Acorn Count:

N side gully 300

85 nest tree! (mostly <sup>black</sup> golden oak under peeling bark) 200

1° gran ~ 2000

saw 1232, 1462, 1463, 1515

1232 chased chipmunk on nearby log

2500

1988

M. Stanback

1

M. FormicivorusPrarie Home FieldHNHR

4 May 1700 1508 = 87.5 (103) / 1507 = 81.6 (106) / 1506 = 82.2 (81)  
 1505 = 84.7 (96)

12 <sup>Jun</sup> ~~MA~~ Walt Found 2<sup>nd</sup> nest - babies hatching today.

17 Jun 1645 R = 12.5, LB = 15, K = 24.3 (11.3), M = 24.3 (11.29)

A runt egg still remained in the nest. I removed it

I removed K & M & added them to OKCO

5 July <sup>1645</sup>  
 B 68.8 75 21.25 25 49.6 15 28.6 1646  
 R 71 76 21.35 23.5 47.6 13.5 31.5 1647

1487  
1581  
1572

1988

M. Stanback

1

M. FormicivorusVolcan Irazu

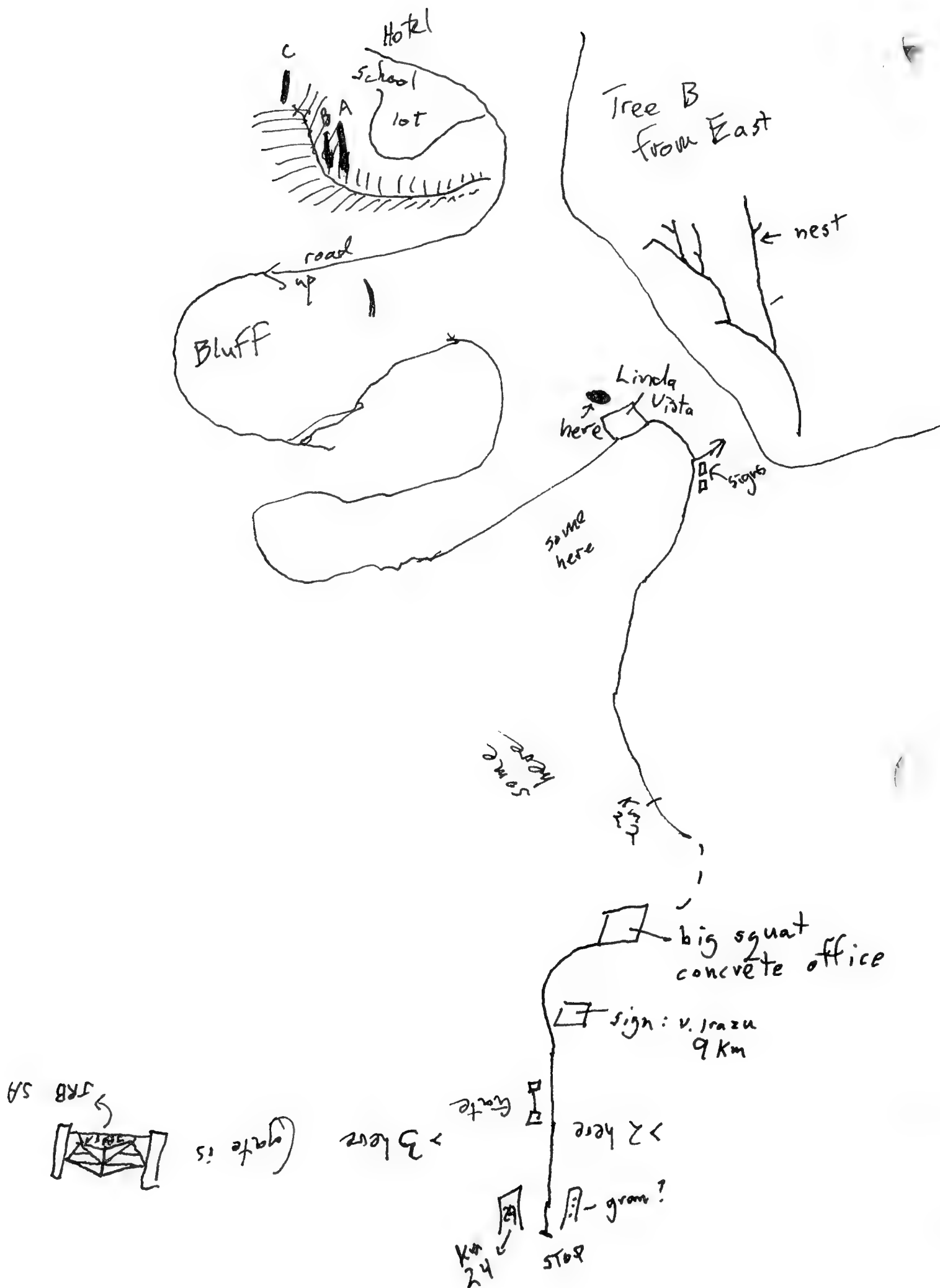
16 Mar

0915 Around the ravine E of the hotel, I hear & see several birds ( $> 2?$ ) They karrit alot, ~~no~~ few ~~notes~~ heard. There are acorns on the oaks

0940 Watched a ♀ fly to a fence post, then fly to the ground to forage (hopping around) for 35 sec. She flew into a tree where she stayed @ 1 min, then she returned to the post, then the ground (same area) and foraged in the grass for 1:40. She took small pecks in the grass - presumably after small prey items (no large prey items were observed taken) There are 4 or birds in this general area (within hearing range) I don't know how many groups.


1000 Found nest. I dub the Ravine Group. Nest is @ 25 m high, diam nest ht 25 cm, dir  $120^\circ$  (no declination figured yet) A ♂ visited the hole (looked in) then moved up. Soon a ♀ did the same. ♂ left. Then another ♀ came out of the hole. Both the ♀♀ had light eyes and adult crowns. Cooperative breeding! Well, not breeding yet. I watched hole and saw ♀ removing chips - but it is a deep hole - I'll be watching for egg tossing.

1020 New group = Bluff. There are at least 8 birds here. An oak is currently dropping acorns on the inside of the road curve. Many (if not most) of them are so large and round that I doubt if the woodpeckers can carry them. Many are @ 1 inch in diameter. Nonetheless, there are many empty or partially eaten ones on the



M. FormicivorusVolcan Irazu

(16 Mar)

ground. Some are split, but most seem to be opened through the side  and some or all of the meat eaten out from this entrance. Another oak just up the road is currently Flowering. I continued past the Linda Vista (more ACWs) to a left turn for the Instituto de Desarrollo Agrario. (Sign next to it is red white & blue Union Irazu (Costa Rica - Canada) I took this dirt road @ 700 m. I found roost trees, but saw no birds. See map for more birds seen. Next sizable (+ accessible) group seen was further on, past the sign that says V. Irazu 9 km. Group here had  $\geq 3$  on the SE side of the road,  $\geq 2$  on the NW side: 2 groups? I ~~walked~~ turned around shortly after this, at km post 24. The habitat gets very good at this point - more trees than open, but still both. It's now 1240. There's a "sort of" roost tree - granary? abd? just across the road from post 24. I'll try to get a photo.

1400 Back at Bluff. Lone oak (connected to curve oak across by wire) has sapsucking holes - some look fresh. There are  $\geq 4$  birds here now. 1 bird flew into curve oak but was displaced with a growl by another bird.

1415 At Ravine, a bird is throwing chips out of hole.

1530 Are those storage holes on the mid ht dead branch on the big spindley tree on the bluff? They look like it, but they don't look in great shape. No interest in them yet, tho birds are in the tree. Some chasing here too.





1988

M. Stanback

3

M. Formicivorus


Volcan Irazu

(16 Mar) 1545 Ravine birds still spitting chips. Concerning the ground foraging.... I think I could catch 'em with peanuts & jay traps - they like to sit on fenceposts too

1800 Roost watch at Hotel group (is this Ravine?) Saw at least 6 birds here. Saw pre-roost mounting (A to B, B to A, then A to B) Roosty 1800-1810.

17 Mar 0520 ACW's active

0830 hotel birds are working on a hole in hotel tree I've been laid up by Food poisoning (& alt sickness?) so not much data today

1500 Watching Bluff group. No one visited my suspected granary limb. I thought I saw a bird go to a hole in a big fat snag base @  $\frac{1}{2}$  way up 

1330 Just saw a bird fly from Bluff to Hotel

Birds are going to (& entering) the above hole repeatedly

1340 I'm pretty sure I just saw a bird tossing chips from this hole -  $\therefore$  still under construction?

1343 Just saw a bird fly from Bluff to ravine. There's quite a bit of karriting here. Also, I think I'm seeing more ground foraging - the birds sit low (10') on tree trunks, then drop (I couldn't tell if they were landing) These birds make very little (most vocalizations are karrits) Alarm call similar.

1357 Watching fruiting tree at curve. Lots of birds here - can't say for sure whether it's > 1 group (esp since there's quite a bit of chasing) I watched a bird peck at an acorn (much larger than its head (they all are) for @ 1 min,



1988


M. Stanback

4

M. Formicivorus

Volcan Irazu

(17 Mar) then move to another acorn nearby. The bird pecked a hole in the acorn and looked to be eating it there, while it was still attached. This explains why I never see birds carrying acorns, why I've seen no storage holes (though I'm still looking), why all the eaten acorns are under the tree, why the eaten acorns are generally not finished (no anvils - they must just eat til it breaks), and why all the activity is in this one tree (you can't eat it at your leisure). Birds seen flying off in several directions, including SW. Looking at the curve oak, I see that, though most of it has ripening acorns, some branches are flowering and putting out new leaves.

18 Mar 0930 While watching the curve oak, I see a woodpecker leaving with an acorn. It looked to be holding it like , probably by an edge it pecked through.  
0940 Saw bird leave w acorn, to same destination  
I get the impression that, at any one time, there are many partially eaten acorns hanging on the tree. Birds peck at an acorn for several minutes, then move to another (or are chased from their original). They do seem to be eating, but I haven't seen a bird pull out a big chunk of acorn meat. The birds are not especially shy - they are willing to land and sit @ 10 m from me.

0955 I break open @ 10 acorns and set them together in the grass by the fence. Will the birds come down?  
(none removed by 1500)



1988

M. Stanback

5

M. Formicivorus

(18 Mar) I haven't noticed any Flycatching (Hastings style). It's always cold, <sup>dark</sup> cloudy, & windy - day length is the same - I can't imagine a big pulse of insects here - what is growth rate like? Just saw a bird that looked like a ~~summer~~ <sup>scarlet</sup> tanager - striking. ♂ black wings w 2 fat white bars & similar, but body is yellow.

1034 ♀ arrived at an already opened acorn and began eating (again, little bites) she continued working on this acorn until 1043, when she Flew away suddenly.

No dark eyed individuals seen yet. Alarm called for passing small buteo (broad winged hawk?)

There seems to be at least a couple ACWs around the curve oak at all times. I would investigate other oaks for acorns, but that would mean climbing fences & trespassing in this rather populated area. Higher up the volcano there are fewer people, but there's no way to get there from here. Though it's 50° & windy, there are cattle egret here. At 1059 a ♀ landed on the same acorn as 1034 ♀ and began eating. Her eating rate slowed until she was just sitting on it looking around. She left at 1103.

1115 Watching ravine "nest" tree. Bird sitting near hole, but did not visit. I think I see a stored acorn (!) in a semi-natural hole near the top of the ravine tree.

in grass for 1.5 min } acorn Watched ravine bird forage Others ground foraging too - should do some sweep netting. 1142 rain - quit

1330 ~~watched ravine~~ Watched ravine "nest" for @ 15 min - no interest. There are at least 3 birds here.



1988


M. Stanback

6

M. Formicivorus

(18 Mar) Some oak comparisons. The curve oak (with the huge acorns) has thick leaves that are yellow on the under-side (like a golden oak). The leaves (esp the newer ones) are rather fuzzy <sup>dusty</sup> as well. I found another oak with smaller, shinier leaves <sup>(green underneath)</sup> that appears to have dropped acorns not too long ago. The caps are much smaller than those on the curve oak. The bark of this tree has a orange tint to it (probably lichen). The newest leaves seem greener than the new leaves on the other oak (with their ~~yellow~~ red color).

1512 ACW landed at acorn and started pecking. I couldn't tell whether it had already been opened (I think it had, for the bird was quite soon eating from a rather large opening). It ate until 1515, when another bird (a ♂) displaced it and began eating. This bird left at 1517.

Feeding birds are forced to eat in rather precarious positions,  similar to those of Hastings birds removing acorns. Again, I can't say that all the birds

at the curve tree are from 1 group, but there are at least 4 birds that sit peaceably together in the little snag to the W of it between forays into the big tree. Like the Hastings birds, there is some color variation in these guys. The other day I noticed a bird w red (or a fleck of gold) on its chin. In general, these birds are slightly duskier on the belly than Hastings birds, but not much. Just heard an alarm call for a low flying red-tail. (The other day I noticed about 12 RTTA flying together.) I haven't seen any





solid black back  
white patch between  
shoulders

some spots on wing

↓ not in Birds of Panama?

Hairy WP!

also a Br W warbler  
w Blk + Yell face  
Blk chin  
yell throat

→ Blackburnian  
warb?

M. Formicivorus

(18 Mar) acorn carrying since those 2 events this morning.  
 1600 Just saw a bird flycatching (1 sortie) At least I think it was flycatching - it could have decided to return to its perch after taking off. The birds are feeding on green acorns. Feeding bouts on an acorn are often disturbed by other birds (non-group members).  
 1615 A bird just left the curve oak with an acorn. It flew to the same destination as this morning! This tree is a healthy green oak with no visible dead limbs. Furthermore, the bird flew into the center of the crown.  
 Just saw a Nuttall's sized woodpecker (see back of p. 6) pecking in the dirt bank of the road cut! Primaries + 2° worn and very brown.  
 More ACW notes - where you find one roost hole, you'll usually find 4-5, on the same limb.  
 1750-1810 Roost watch. @ 5 birds were hanging out in the hotel tree + environs on arrival. They left @ 1757.  
 1804 2 birds returned, sat around for 1 minute then both roosted in the same hole (@ 30 sec apart). At 1807 3 more birds arrived - 2 engaged in pre-roost mounting - the third flew over and interrupted it. 1809 one bird entered ~~the~~ roost hole. 1810 the 2 last birds, after 1 mount, both roosted in that hole. So... 5 birds in this one roost hole.

19 Mar 0800 Ground foraging: bird sits on a fence post and scans the ground - for sometimes up to a minute. Sometimes a bird flies toward the ground only to return to the post without landing. Is



1988

M. Stanback

8

M. Formicivorus

(19 Mar) this flycatching or an aborted ground foray? Once the bird does land, however, it doesn't seem to be ambushing a particular prey item, at least after the initial peck. Rather, it hops around a relatively small area (3 m diam) taking occasional pecks, for up to a minute. Here near the curve oak, several birds are involved simultaneously, with perch displacement occurring regularly.

How long a bird stays at a given acorn seems to depend on how good a perch it is. Birds often land at an acorn, spend several seconds getting footing, take some preliminary pecks, lose and/or change their footing, peck some more or leave. Birds that stay for long periods at an acorn seem not to change position much or at all during this time.

From where I sit, I can see ~~4~~ 5 birds ground foraging, each bird no more than 20 m from its near neighbor.

Again, much, if not most of a bird's time doing this is actually spent sitting still on a fencepost. Watching these 5 birds more closely, I see that 4 of them are sitting on adjacent fenceposts, about 3 m apart. Individuals may sit for 5 min without moving. Time spent on the ground is generally short. The 5 birds I'm watching have been engaged in this activity for @ 10-15 minutes. Individuals quit this activity and leave singly. Once gone, they do not return. All birds have left the foraging area. They were here 15-20 min.

Acorn caps remain on the tree after the acorns have dropped.

0846 A single karrit (not particularly alarm-like) caused



1988

M. Stanback

9

M. Formicivorus

(19 Mar) 8 birds to leave the tree - <sup>(the curve oak)</sup> quickly, en masse, and in the same general direction (downhill). After these left, there were still at least 3 birds remaining in the tree or an adjacent one. Thus there are at least 11 birds foraging in this single tree. (I have since found another fruiting oak just up the road 100m). As I may have said yesterday, particular acorns are visited repeatedly and by different birds. It's probably my imagination, but there seem to be more ♀♀ than ♂♂. Flights from fenceposts are flycatching sorties. Flying insects do seem to be predominantly low flying (ie just above grass level), perhaps due to the continual strong wind.

0900 Woodpecker activity here at the curve oak has ceased.

0915 The birds are back, but still not as active as before. Most of the acorns on the ground (practically all the larger ones) and many of those still on the tree have split open, in one two or three places. The splits are widest on the sides. The acorns are not germinating - no hypocotyl (?) is emerging from the apex. The woodpeckers use these splits as an entry point into the acorn. In some of the acorns (I found on the ground) there was no woodpecker damage to the shell of the acorn, yet part of the acorn meat had been removed by woodpeckers through the split. (Had the acorn not fallen, the birds probably would have widened the opening to gain access to more meat.)

0945 Watching Ravine birds. They (seemed to) chased a small very green toucanet out of larger live ravine tree (harassing)



1987 M. Stanback

M. Formicivorus1987 Babies hematocritHNHR

|            |      |                                                 |      |        |                                                            |
|------------|------|-------------------------------------------------|------|--------|------------------------------------------------------------|
| 1378       | UAZ  | 43.5, 43.5, 43                                  | 1411 | Ron    | 41                                                         |
| 1379       | UAZ  | 43                                              | 1412 | Ron    | 44                                                         |
| 1380       | UAZ  | 42, 41                                          | 1413 | Ron v  | 44                                                         |
| 1381       | KOUT | 42.5                                            | 1414 | Gaz    | 43, 44, 44.5, 43.5                                         |
| 1382       | KOUT | 39, 39.5                                        | 1415 | Gaz    | 42                                                         |
| 1383       | KOUT | 38.5                                            | 1416 | Gaz    | 42.5, 42.5                                                 |
| 1390       | OKCO | 45, 46, 45.5, 44                                | 1417 | Gaz    | 39, 37                                                     |
| 1391       | OKCO | 43                                              | 1418 | Gaz v  | 42.5, 44, 44                                               |
| 1392       | OKCO | 45, 43.5, 46                                    | 1419 | Dark   | 32, 32, 32                                                 |
| 1393       | OKCO | 37                                              | 1420 | Dark   | 27.5 soup                                                  |
| ✓ 1394     | OKCO | 42, 42.5                                        | 1421 | Dark v | 43                                                         |
| 1395       | BUCK | 44.5                                            | 1422 | Moon   | 48, 47                                                     |
| 1396       | BUCK | 39                                              | 1423 | Moon   | 52                                                         |
| 1397       | BUCK | 46                                              | 1424 | Moon   | 51, 46                                                     |
| 1398       | BUCK | 46.5, 48                                        | 1425 | Moon v | no blood                                                   |
| ✓ 1399     | BUCK | 42.5, 42.5                                      | 1427 | LHAY   | 45.5, 45                                                   |
| under 1400 | A1   | 47, 44, 46.5                                    | 1428 | Y      | 50.5, 51.5                                                 |
| " 1401     | A1   | 45, 42.5, 43.6                                  | 1429 | LAZ    | 51, 52                                                     |
| " ✓ 1402   | A1   | 48, 48, 46.5                                    | 1430 | CVGR   | 36, 36, 37                                                 |
| 1403       | Plge | 53, 53, 53 <sup>710</sup> <sub>51.5, 52.5</sub> | 1431 | CVGR   | 37, 35                                                     |
| ✓ 1404     | Plge | 52, 51, 52 <sup>710</sup> <sub>52.9</sub><br>55 | 1432 | CVGR   | 34, 34.5 $\left(\frac{32}{96}\right)$                      |
| 1405       | SHW  | 37.5, 38                                        | 1433 | CVGR   | <del>32.5</del> $\left(\frac{32.5}{95}\right)$             |
| 1406       | SHW  | 37, 37                                          | 1434 | CVGR   | $\left(\frac{18}{47}\right)$                               |
| 1407       | SHW  | 47                                              | 1435 | FRSR   | 37, 37                                                     |
| 1408       | BKOK | 41, 40, 41                                      | 1436 | FRSR   | 23, 23.5, 24                                               |
| 1409       | BKOK | 45.5, 47                                        | 1437 | Plge   | $\left(\frac{33}{71}\right)$                               |
| ✓ 1410     | BKOK | 41.5, 42, 42.5                                  | 1438 | 1800   | $\left(\frac{3.4}{6.8}\right)\left(\frac{2.4}{4.8}\right)$ |

↳ juv



14

|      |     |              |
|------|-----|--------------|
| 1439 | CV2 | 35.7         |
| 1440 | Y   | 34.5, 34.5   |
| 1441 | Plg | 45, 45.5, 46 |
| 42   |     | 48.5, 48, 50 |
| 43   |     | 39.5         |

1988

M. Stanback

1

M. Formicivorus  
Hematocrit

HNHR

|      |                                                |      |                                                                                                          |      |                                                                                                                                         |
|------|------------------------------------------------|------|----------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1470 | 34.5, <sup>27.5</sup> / <sub>89</sub> 34       | 1497 | 40, 40 40                                                                                                | 1524 |                                                                                                                                         |
| 1471 | 28, <sup>24</sup> / <sub>89</sub> 28           | 1498 | 44 44                                                                                                    | 1525 |                                                                                                                                         |
| 1472 | 35 35                                          | 1499 | 47.5 47.5                                                                                                | 1526 |                                                                                                                                         |
| 1473 | 36, 34, 34 <sup>32.5</sup> / <sub>89</sub>     | 1500 | 47 47                                                                                                    | 1527 | 46.5, 48 47.25                                                                                                                          |
| 1474 | 42, 43.5 <sup>42.5</sup> / <sub>89</sub>       | 1501 | 51, 52 51.5                                                                                              | 1528 | 47.5, <sup>21</sup> / <sub>47</sub> 47.5                                                                                                |
| 1475 | 40, 40 40                                      | 1502 | 46, 45, 44 45                                                                                            | 1529 | 57 wow 57                                                                                                                               |
| 1476 | 47, 46 46.5                                    | 1503 | 36, 36, 36.5 <sup>36.167</sup> / <sub>89</sub>                                                           | 1530 | 49, 46.5, 48, 47 47.625                                                                                                                 |
| 1477 | 44, 42 43                                      | 1504 | 48, 47.5, 47 47.5                                                                                        | 1531 | 48.4, 48 48.2                                                                                                                           |
| 1478 | 36, 36 36                                      | 1505 | <del>53, 54</del>                                                                                        | 1532 | 52 52                                                                                                                                   |
| 1479 | 51.5                                           | 1506 | 4                                                                                                        | 1533 | 49.5, 49 49.25                                                                                                                          |
| 1480 | 42.82                                          | 1507 |                                                                                                          | 1534 | 48.5 48.5                                                                                                                               |
| 1481 | 44                                             | 1508 |                                                                                                          | 1535 | 39, <del>40</del> 39                                                                                                                    |
| 1482 | 44.37                                          | 1509 | 53, 54 53.5                                                                                              | 1536 | 38 37                                                                                                                                   |
| 1483 |                                                | 1510 | 46, 50 ? 46                                                                                              | 1537 | 42, 42 42                                                                                                                               |
| 1484 |                                                | 1511 | <sup>38</sup> / <sub>97</sub> <sup>39.12</sup> / <sub>89</sub> , 39 coag <sup>31.2</sup> / <sub>89</sub> | 1538 | 48, <sup>49</sup> / <sub>89</sub> 50 <sup>37.81</sup> / <sub>89</sub> <sup>23.52</sup> / <sub>89</sub> <sup>16.39</sup> / <sub>89</sub> |
| 1485 |                                                | 1512 |                                                                                                          | 1539 | 47, 48, 47.5 47.5                                                                                                                       |
| 1486 |                                                | 1513 |                                                                                                          | 1540 | 48, 49, 49 48.75                                                                                                                        |
| 1487 |                                                | 1514 |                                                                                                          | 1541 | 46.5, 47.5 47                                                                                                                           |
| 1488 | 44, 43 43.5                                    | 1515 | 51, 54 52.5                                                                                              | 1542 | 46, 46.5, 45.5 46                                                                                                                       |
| 1489 | 46.5, 45.5 46                                  | 1516 | 49, 52 50.5                                                                                              | 1543 | —                                                                                                                                       |
| 1490 | 45, 43 44                                      | 1517 | 48 48                                                                                                    | 1544 | 44, 44 44                                                                                                                               |
| 1491 | 45 45                                          | 1518 | see cr                                                                                                   | 1545 | 43.5, 43.5 43.5                                                                                                                         |
| 1492 | 34, 33 33.5                                    | 1519 | 45, 47 46                                                                                                | 1546 | 47.5 47.5                                                                                                                               |
| 1493 | 46 46                                          | 1520 | 46 coag                                                                                                  | 1547 | 50.5, 51 50.75                                                                                                                          |
| 1494 | 53, 53.5, 53 <sup>52.167</sup> / <sub>89</sub> | 1521 | 45, 46 45.5                                                                                              | 1548 | 41 41                                                                                                                                   |
| 1495 | 41, 41.5, 41 <sup>41.167</sup> / <sub>89</sub> | 1522 | <del>49</del> see cr                                                                                     | 1549 | <sup>34.5</sup> / <sub>82</sub> , <sup>15</sup> / <sub>55</sub>                                                                         |
| 1496 | 44, 45 44.5                                    | 1523 |                                                                                                          | 1550 | 41, 40 40.5                                                                                                                             |

20/11/20  
20/11/20  
20/11/20

1988

M. Stanback

2

M. FormicivorusHematocritH/HR

|      |                                                      |      |                                                                       |      |                                                                           |
|------|------------------------------------------------------|------|-----------------------------------------------------------------------|------|---------------------------------------------------------------------------|
| 1551 | 40.5, 41 <sup>40.75</sup>                            | 1583 | 48, 46 <sup>47</sup>                                                  | 1612 | 44, <sup>35/40</sup> ~ 43                                                 |
| 1552 | 40, 40, 39.5 <sup>29.83</sup>                        | 1584 | 51, 50 <sup>50.5</sup>                                                | 1613 | 37, 37 <sup>37</sup>                                                      |
| 1553 | 51, 50 <sup>50.5</sup>                               | 1585 | 43.5, 41 <sup>42.5</sup>                                              | 1614 | 36.5, 37 <sup>36.75</sup>                                                 |
| 1554 | 46.5, 46.5 <sup>46.5</sup>                           | 1586 | 50, 49 <sup>49.5</sup>                                                | 1615 | 42, 41 <sup>41.5</sup>                                                    |
| 1555 | 45, 44 <sup>44.5</sup>                               | 1587 | 44.5, 43 <sup>42.75</sup>                                             | 1616 | 36, 37, 37 <sup>36.75</sup>                                               |
| 1556 | 40.5, 42 <sup>41.25</sup>                            | 1588 | 54, 55 <sup>54.5</sup>                                                | 1617 | 32 (streak?) 26? <sup>chg</sup>                                           |
| 1557 | 46, 43 <sup>44.5</sup>                               | 1589 | 42.5                                                                  | 1618 | 34 <sup>34</sup>                                                          |
| 1558 | 42, 42 <sup>42</sup>                                 | 1590 | 40, 39.5, 39                                                          | 1621 | 41, 41 <sup>41</sup>                                                      |
| 1559 | 46, 44 <sup>45</sup>                                 | 1591 | 45, 45, 44 <sup>44.75</sup>                                           | 1622 | 46, 45 <sup>45.5</sup>                                                    |
| 1560 | 45, <del>44</del> <sup>45</sup>                      | 1592 | 41, 41 <sup>41</sup>                                                  | 1623 | 42, 43, 43 <sup>42.75</sup>                                               |
| 1561 | 45, 46 <sup>45.5</sup>                               | 1593 | 33, 33, 32 <sup>32.75</sup>                                           | 1624 | 42 <sup>42</sup>                                                          |
| 1562 | 48, 47.5 <sup>47.75</sup>                            | 1594 | 33, 34 <sup>33.5</sup>                                                | 1625 | 41, 42, <sup>33/81</sup> <sup>40.7</sup> <sup>38.93</sup> <sup>41.3</sup> |
| 1563 | 46.5, 46 <sup>46.25</sup>                            | 1595 | 33, 34, 34 <sup>33.75</sup>                                           | 1626 | 44, <sup>23/59</sup> ~ 43                                                 |
| 1564 | 42, 39, 42 <sup>41</sup>                             | 1596 | 39, 39, 38 <sup>38.75</sup>                                           | 1627 | 41, 42, 42 <sup>41.75</sup>                                               |
| 1565 | 43, 44.5, 44.5 <sup>44</sup>                         | 1597 | 38, <sup>32/98</sup> <sup>37.9</sup>                                  | 1628 | 45, 45, 46 <sup>45.75</sup>                                               |
| 1566 | 42, 45, 41 <sup>42.5</sup>                           | 1598 | 44, <sup>27/63</sup> <sup>43.5</sup>                                  | 1629 | 43, <sup>32/77</sup> <sup>42.3</sup>                                      |
| 1567 | 38, 37 <sup>37.5</sup>                               | 1599 | 48.5                                                                  | 1630 | 39.5, 39.5, 39.5 <sup>39.5</sup>                                          |
| 1568 | 41 <sup>41</sup>                                     | 1600 | 44, 43.8 <sup>43.9</sup>                                              | 1631 | 35, 34, 34.5 <sup>34.5</sup>                                              |
| 1569 | 35, 34, 35 <sup>34.75</sup>                          | 1601 | <sup>20/42</sup> <sup>47.6</sup> = <sup>12/36.5</sup> <sup>47.1</sup> | 1632 | 41, 42, 40 <sup>41</sup>                                                  |
| 1570 | 38, <sup>36/92</sup> <sup>39.1</sup> <sup>38.4</sup> | 1602 | 46, 46, 45 <sup>45.75</sup>                                           | 1633 | 39 <sup>a bit of coag = 40?</sup>                                         |
| 1575 | 42.5, 44 <sup>43.25</sup>                            | 1603 | 45, 45, 44 <sup>44.75</sup>                                           | 1634 | 42                                                                        |
| 1577 | 42 <sup>42</sup>                                     | 1604 | 45, <sup>12.2/66</sup> <sup>44</sup>                                  | 1635 | 40                                                                        |
| 1578 | 43, 43.5, 44                                         | 1605 | 41, 42 <sup>41.5</sup>                                                | 1636 | 44, 45 <sup>44.5</sup>                                                    |
| 1579 | 43.5, 44.5, 45                                       | 1608 | 44, 44 <sup>44</sup>                                                  | 1637 | 40                                                                        |
| 1580 | 44 <sup>44</sup>                                     | 1609 | 43, 42 <sup>42.5</sup>                                                | 1638 | 44                                                                        |
| 1581 | 32, 33 <sup>32.5</sup>                               | 1610 | 38, 36 <sup>37</sup>                                                  | 1639 | 47.5                                                                      |
| 1582 | 44.5, 45 <sup>44.75</sup>                            | 1611 | 45.5, 44.5 <sup>45</sup>                                              | 1640 | 44                                                                        |
|      |                                                      |      |                                                                       | 1641 | 39 = <sup>27/70?</sup> <sup>23.57</sup>                                   |

age at  
which  
10 chor > wt  
> wt

1988

M. Stanback

3

M. Formicivorus  
Hematocrit

HNHR

1642 40, 40

1674 : 49, 49, 50, 49, 50, 50, 49, 50.5

1643 34.5, 34.9, 35

1675 : 69.5, 65, 68.5, 67.5, 66

1644 39.8, 40, (37.5)

1676 : 66.6, 67, 66, 65, 66, 67, 64, 61, 65.5, 64

1645 38, 40

1677 : 73, 66, 67, 66, 65, 69

1646 48, <sup>44</sup>/<sub>93</sub>

1678 : 66, 67, 70, 68, 66.5

1647 41.5, 42, 41.5

1110 : 63, 63, 64, 64, 60, <sup>33</sup>/<sub>56</sub>

1648 35.5

1649 38, 38, 38.7

1650 39

1651 <sup>40</sup>/<sub>93</sub>

1652 42, 42

1653 42

CVI 1654 44.4, 44.8, 44

CVI 1655 44

CVI 1656 50.8, 50.6

UAR 1657 50.5, 50.5, 50.5

UAR 1658 47, 47, 47

was  
1656 → UAR 1659 44.9

1660 41, 43

1661 47, 47

1662 48, 47

1663 45

1664 42, <sup>40</sup>/<sub>97</sub>1665 48, <sup>35</sup>/<sub>79</sub>1666 41, <sup>31</sup>/<sub>78</sub>

1667 44, 45, 44

1673 ~~1668~~ 57, 59, 58,  
62, 60, 60  
56

COIN

1988 M. Stanback

1

## Species Accounts

(begin 1 April)

HNHR

Orioles & swallows arrived @ 21 March (I was ~~gone~~ <sup>gone</sup>)

1 Apr Western Kingbird: CV2

Cnemidophorus

5 Apr Black Headed Grosbeak(?): Red House

8 Apr Ash throated Flycatcher

18 Apr Golden Eagle = Gazebo

20 Apr W. Flycatcher FED on Red House Porch 2<sup>nd</sup>: 22 Apr 4 = 25  
3<sup>rd</sup>: 23 or 24

21 Apr Rattlesnake - Arnold

27 Apr 0955 Mountain Lion!! Crossing lane to SHIL tween 1800 & Hors

28 Apr Baby Quail! Judy saw a Fresh Fawn!! Early, early.

30 Apr 0555 Mountain lion. Almost same place as 27 Apr. Good view.

Black tip tail. Looks like a yearling. Crossed lane, then sat 60 feet from me for @ 2 min before walking away.

2 May 1800 Heard deer scream between Pump & 1500. Doe was staring nervously into creek bed. I walked closer, lion jumped up & away (towards SHIL). I peeked into creek bed and saw a dying fawn.

5 May chestnut-backed chickadee nest: in knot hole in Finch sycamore. (View from parking Its in the trunk with the styrofoam granary, @ 10 feet up, W facing.

9 May Golden Eagle: Y

Kite or Prairie Falcon: Y (Long Field)

W Flycatchers hatched this afternoon.

19 May Caught Horned Lizard on path-side of Red House down to Pat's parking space.

22 May Road kill deer at Gate. Bobcat had been eating and was himself hit - bad shape - was eventually shot.



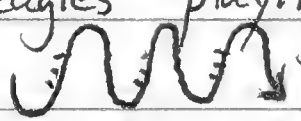
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1988

M. Stanback

2

Species Accounts

- 16 Nov<sup>88</sup> CVI : 2 golden eagles, 1 Falcon <sup>→ together</sup> (peregrine or prairie) HNR
- 30 May 1400 3 golden eagles "playing" tween Haystack, SH/L, & Arnold.  
One was flying  (= flaps). Juv's?
- 31 May FED for 2<sup>nd</sup> Flycatcher nest on Red House Porch
- 2 Jun 2<sup>nd</sup> ED
- 27 May Jackrabbit on way up Buckeye
- 9 Jun 0615 Great Blue Heron - Blm Pond
- 10 Jun Golden oak at Lamb putting on a good crop of acorns!
- 14 Jun 1400 I observed what seemed to be hill-topping by swallowtails.  
They also engaged in spectacular flights - when two "wandering" inds intercepted c/o, they would shoot straight up @ 20 - 30 Ft. Usually one would abandon the ascent before the other one.
- 14 Jun Cliff Swallows - interested in Suzanne's eaves.
- 19 Jun Red House W. Flycatchers hatching (3/4)
- 21 Jun Golden Eagle : at PLAN, mobbed by Cooper's Hawk.
- 28 Jun Gray Fox : lower Arnold Road
- 29 Jun Bobcat + grown cub : Red House
- 13 July Say's Phoebe : Bunk House
- 14 July Bobcat : CV&R
- 18 July Roadrunner : cabin
- 22 July Gray Fox : top of Arnold Road (near cabin)
- 23 July Jackrabbit : Between Red House & Mark & Short's (closer to me)
- 9 Aug Swallow (V G?) at Blm Pond (now dry)  
Valley oak at Blm Pond has aborted it's acorns.
- 12 Aug Jane reports Northern Shrike at Blm Pond.
- 10 Sept 1030 Two adult RTHA go after the same gopher. One drops it, the other gets it and eats it in a nearby tree. Other hawk leaves
- (8 Sept Terek Sandpiper at Mission Beach)

15 Dec (Sat) Finally get a good look at a Merlin. Landed  
+ I had a scope.

1988

M. Stanback

Pituophis melanoleucus

HNHR

30 May 1600 Released snake (length 130 cm). I had fed him (?) a neonate rabbit ( g) on 28 May.







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